Issue 164
PS
1966 Series
PREVENT
MAINTENA NC
MONTH
WHO'S RESPONSIBLE FOR THIS GENERATOR?
HEY, WHERE'RE TH' LIGHTS!
WHO KILLED TH' POWER? THE COMMO'S DEAD!
Will Eisner
SPECIAL FEATURES
GENERATORS
...PAGES 2-15
INSIDE YOUR M60 TANK
...PAGES 52-64

SEND THE

The EIR is the message you write to the man who designs your equipment.

You use the EIR (Equipment Improvement Recommendation, DA Form 2407) no matter who you are or where . . . *at all levels, even depots.*

You can be a rifleman, jeep driver, radio operator, mechanic, radar man, supply man, unit commander, or whatever. It makes no difference . . . if you've got any problem with the design or manufacture of Army equipment, you use the EIR. Or, if you've got an idea for improving the equipment, you send it in on the EIR.

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You tell the Army's commodity command engineers anything that goes wrong with your gear . . . anything, that is, that's not just normal fair wear-and-tear. (For items damaged in shipment, use DD Form 6.)

The commodity commands get around 20,000 EIR's a year . . . and they need more to tell them what's not right with your gear, so shoot 'em in.

Just like para 3-7.4f of TM 38-750 says, you send the EIR *direct* to the National Maintenance Point for your equipment. The addresses are in Appendix II to TM 38-750.

PS

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THE PREVENTIVE MAINTENANCE MONTHLY

Issue No. 164 1966 Series

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GENERAL AND SUPPLY

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COMMUNICATIONS

The AN/MPQ-4A Story 44-51

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 19 February 1965.

DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.

PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

Sgt. Half-Mast,
PS Magazine,
Fort Knox, Ky.
40121

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MENT RECOMMENDATION

ORGANIZATION/ACTIVITY	c. ORG/ACT IDENT CODE
). A, 271st Armor	
LOCATION	d. SUBMITTED BY
PO 08111	J. L. SMITH

OPINION OR REMARKS. DESCRIBE CONDITIONS UNDER WHICH FAILURE OCCURRED. ATTACH PHOTOS OR SKETCHES, IF AVAILABLE

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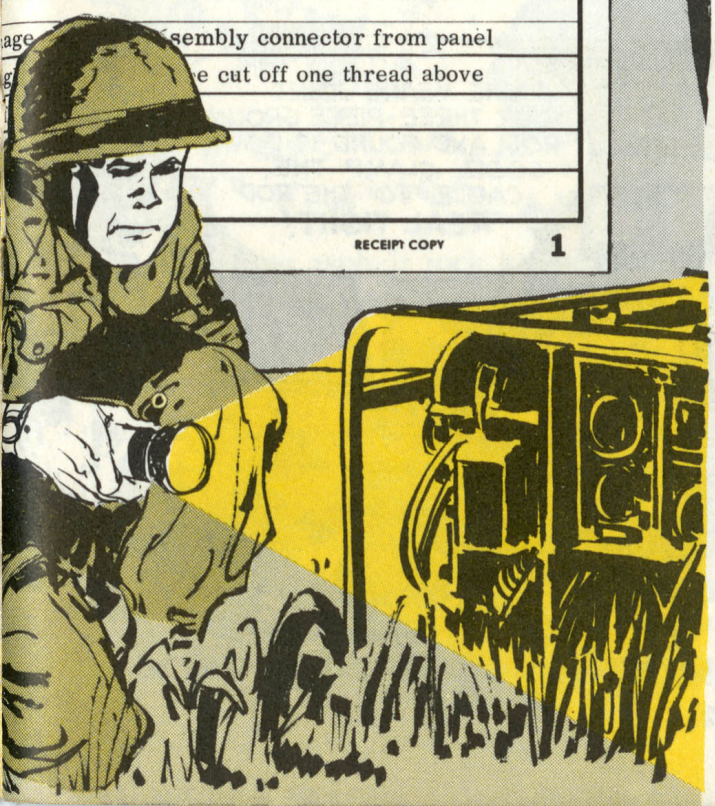
RECEIPT COPY 1



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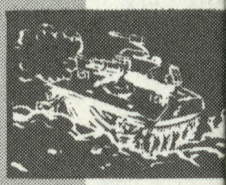

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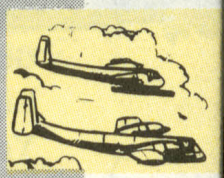

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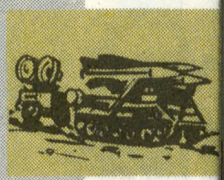

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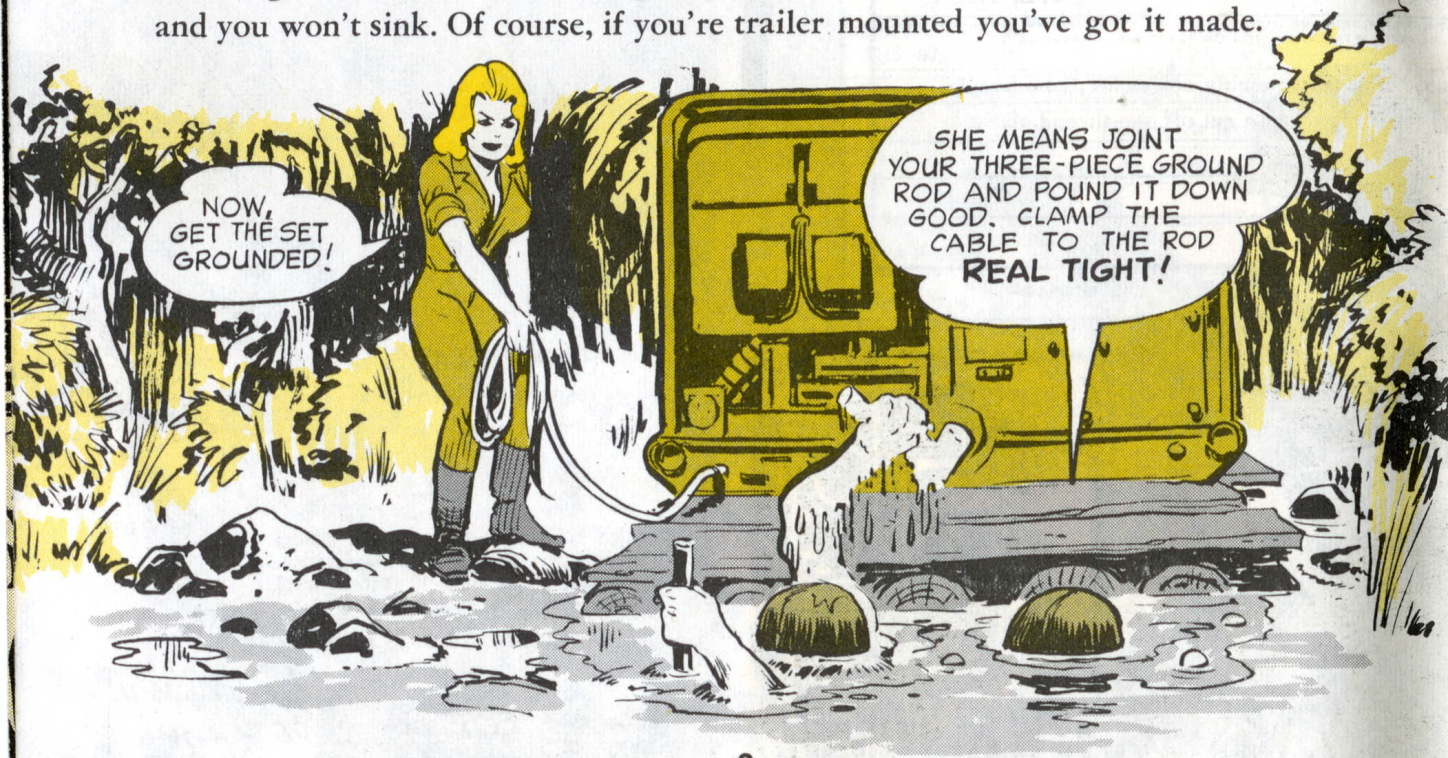
BE YOUR OWN INSPECTOR ON—
PORTABLE GENERATORS...

HERE'S TO MORE

Generator sets come all shapes and sizes—and all need regular attention. Right when you bivouac, f'rinstance, there're big things to do—

You find a spot to dig in for protection and set the rig nice and level. If you're on soft ground, or the mud's deep, a plank or log foundation can clog the bog, and you won't sink. Of course, if you're trailer mounted you've got it made.



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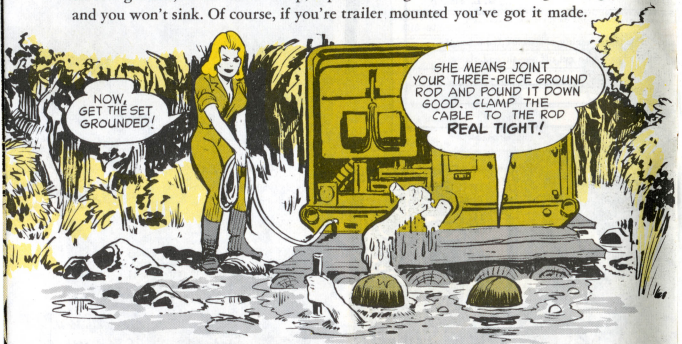
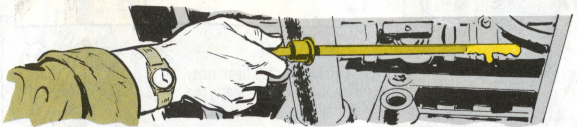


Next get that tarpaulin up and peaked to keep off drip—careful not to block that exhaust stack.

Like any asphalt jock knows, you'll check out the fuel tank and oil supply, and make sure the cap's on the fuel tank good and the gasket's tight.



Whether your rig's dug in or cozy under a trap, remember the area has to be well ventilated at all times. She's got to have air if you want her to do the job.

PS MORE

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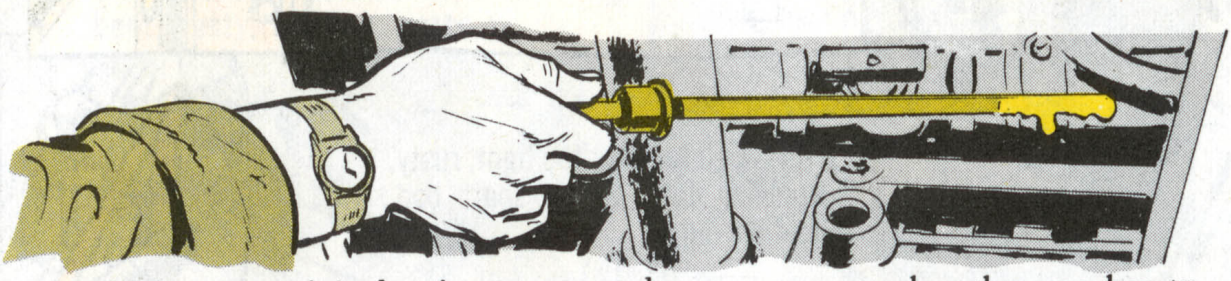


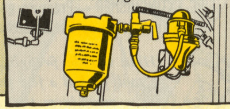
Whether your rig's dug in or cozy under a trap, remember the area has to be well ventilated at all times. She's got to have air if you want her to do the job.

P.S MORE

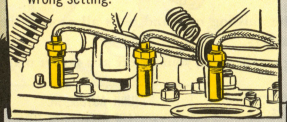
OK! EXAM TIME'S HERE!
IF YOUR RIG DOESN'T LOOK EXACTLY LIKE THIS, NO SWEAT! JUST CHECK THESE THINGS ON YOUR GENERATOR.
GROUND ROD—Too shallow, cable loose or broken, easily tripped over.
SUPPORT LEG (on Trailer Mounts) — Not down, link or chain missing.
BATTERY CHARGE GENERATOR — Belt loose, wires bad, bolts loose, voltage regulator unseated or disconnected, bearings dry.
RADIATOR — Hoses leak, joints drip, winter hood closed in hot weather, pressure cap loose, coolant level low.
FAN—Belt loose or too tight, rusty, wobbling into guard, shaft bad, bearing out.

WATER PUMP — Leaky, shaft, or bushings loose. ☐

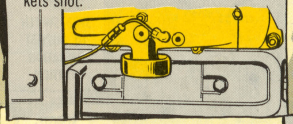
FUEL PUMP AND BOWL — Dirty strainer, wet or dirty bowl, lines loose, gaskets bad. ☐



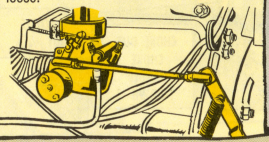
SPARK PLUGS — Connections bad, dirty, lines cracked, loose, wrong setting. ☐



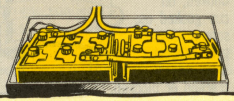
INTAKE AND EXHAUST MANIFOLD — Cracked, loose, gaskets shot. ☐



CARBURETOR — Governor link bent, rusty, binding, parts loose. ☐

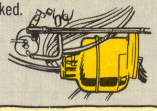


BATTERY — Cables loose, top corroded, caps loose, water low, case cracked. ☐

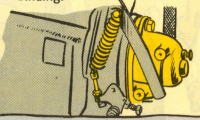


OIL FILTER — Dirty, stopped up, joints loose. ☐

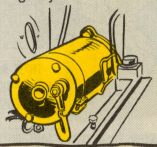
MAGNETO — Points burnt, cover cracked, wires loose or cracked. ☐



GOVERNOR — Joints rusty, pins out, springs gone, links binding. ☐



STARTER — Cables loose, bolts loose, bearings dry. ☐



MORE

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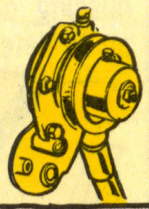

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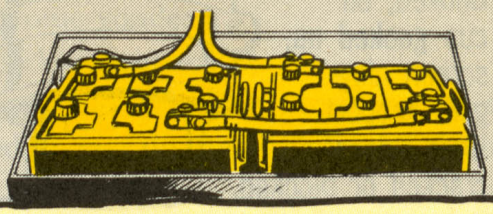

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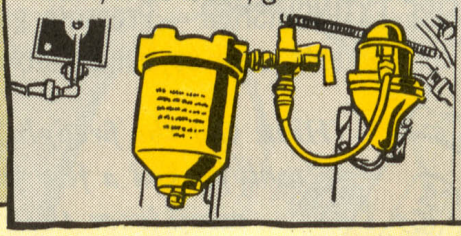

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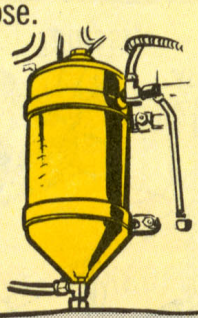

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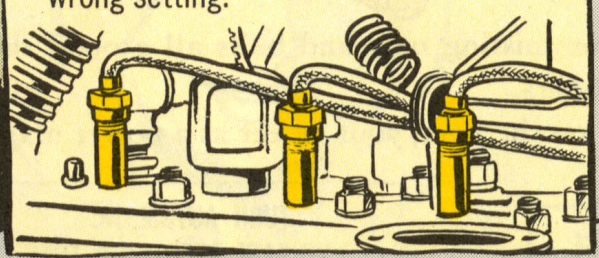

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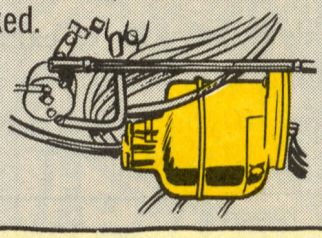

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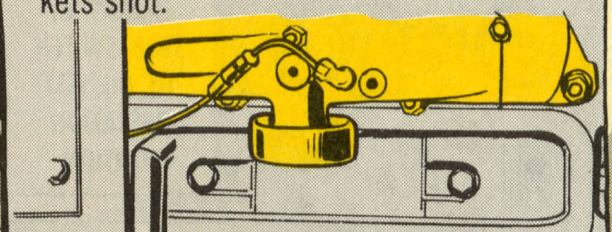
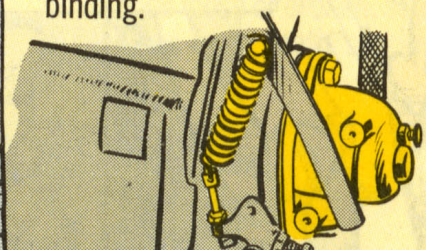


GOVERNOR — Joints rusty, pins out, springs gone, links binding. ☐



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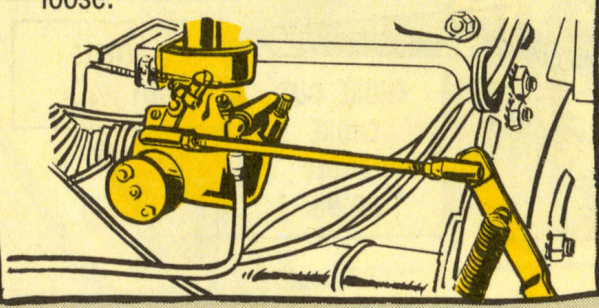

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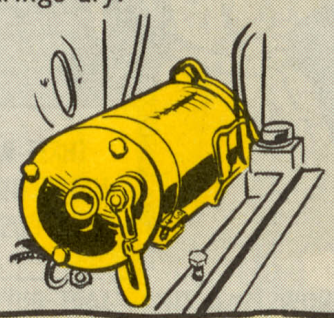


PS MORE

AIR CLEANER — Choked, oil cup gooked up, screen clogged, support loose, pipes cracked or blocked.

DATA PLATES — Painted over, not legible.

PUBLICATIONS AND FORMS — TM's, LO's, MWO's, TB's, missing or not applied, not up to date.

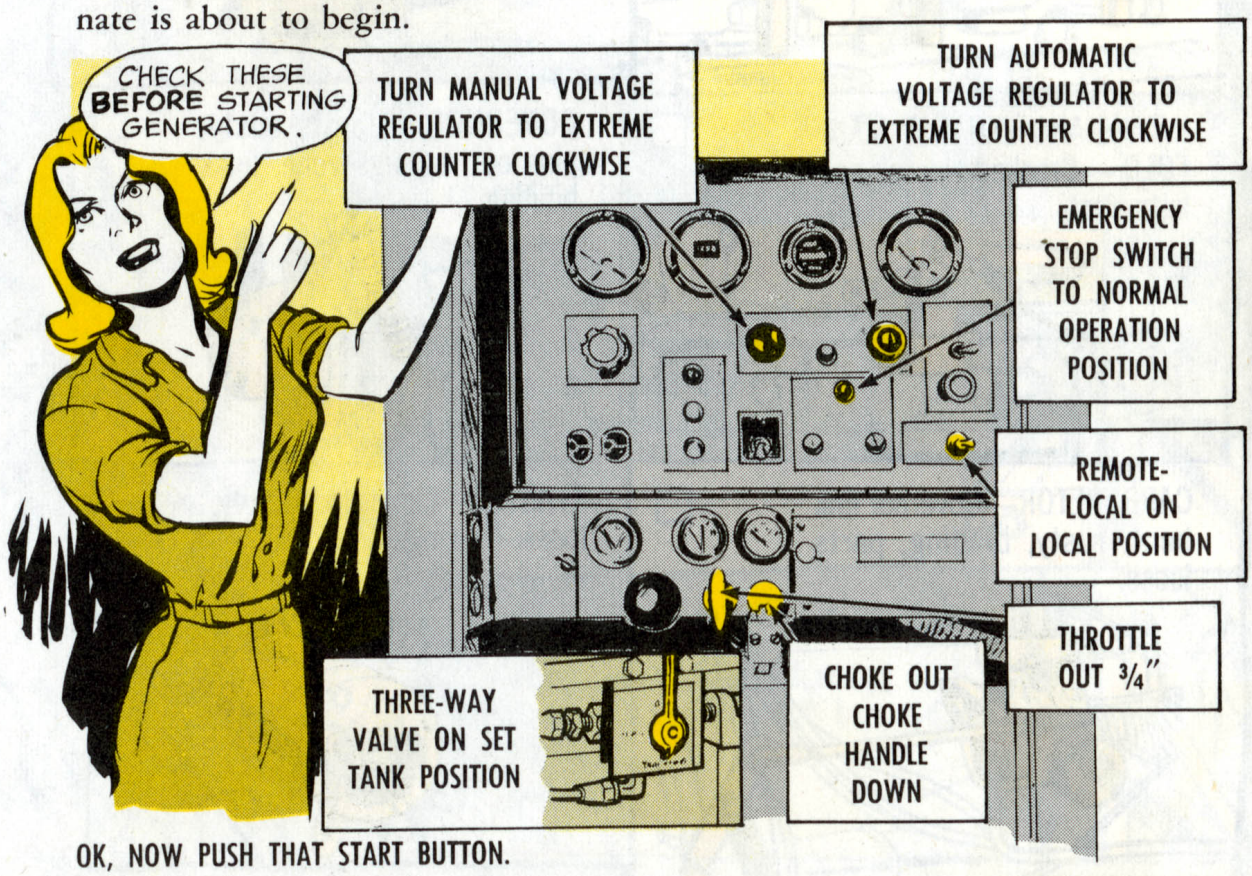
TOOLBOX — Missing, tools gone, messy.

FIRE EXTINGUISHER — Pressure gone or contents used up; handle broken.

(Hint: Get the firefightin' tool parked a few feet away from the rig before you start the generator.)

Then it's a fine idea to eagle-eye for missing nuts and bolts all around the works, along with cotter pins and washers.

And now, if you've found nothing on the bum, your career as a power magnate is about to begin.

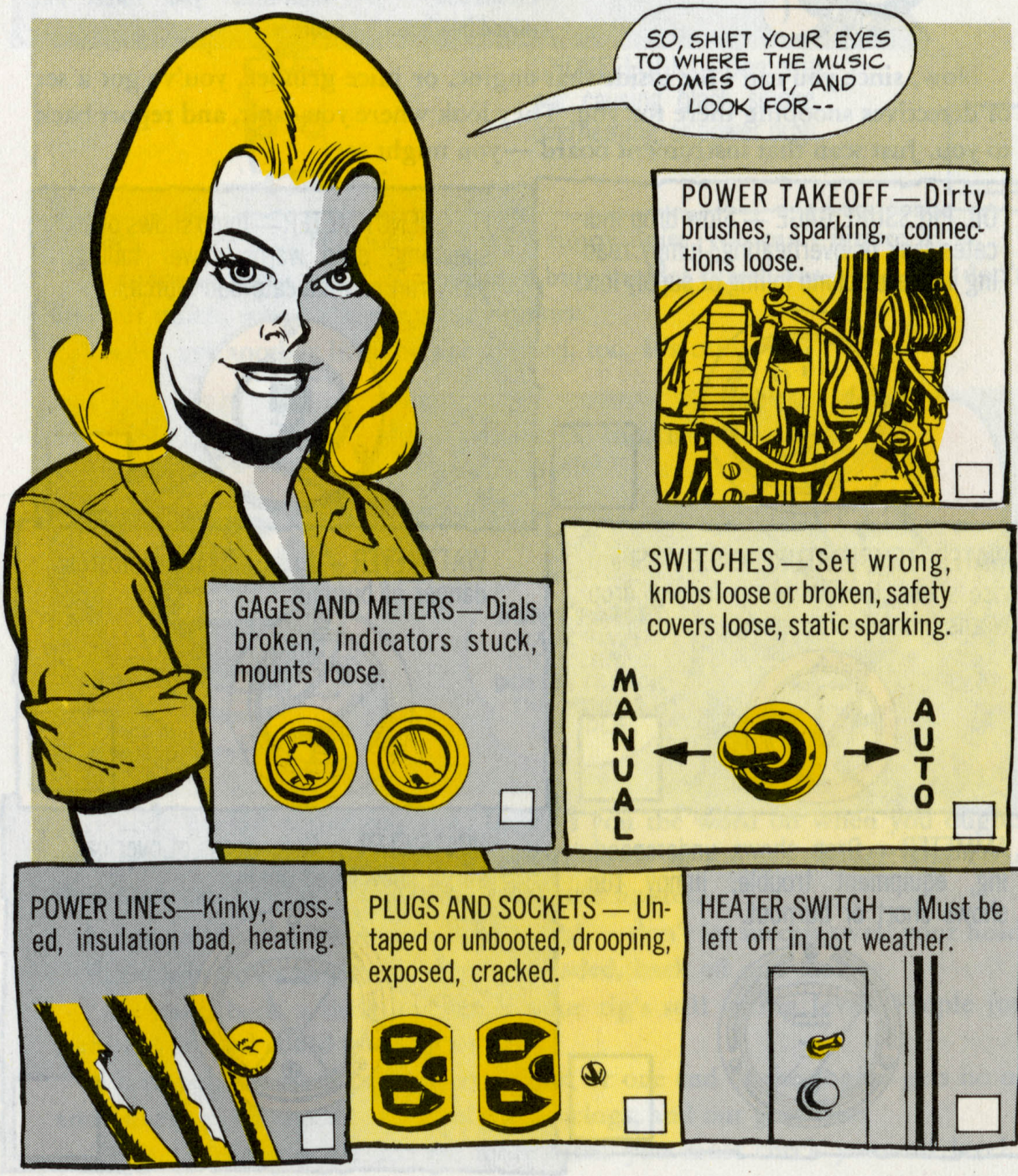


You get 'er up to RPM, throw in the load switch—adjust that throttle again while she's groanin' with pleasure—set 'er on AUTOMATIC as a good girl runs—and you're off into the wild blue electronic yonder.

Except that right now you've got more checking out to do.

See if anything's vibrating too much, or any fuel's dripping. See if the fan's going and the belt's OK, the governor's kicked in, and the fuel's clear and clean in the bowl.

And remember you're double-datin' on this deal—you've got an engine on one end, but the payoff is that generator on the other.



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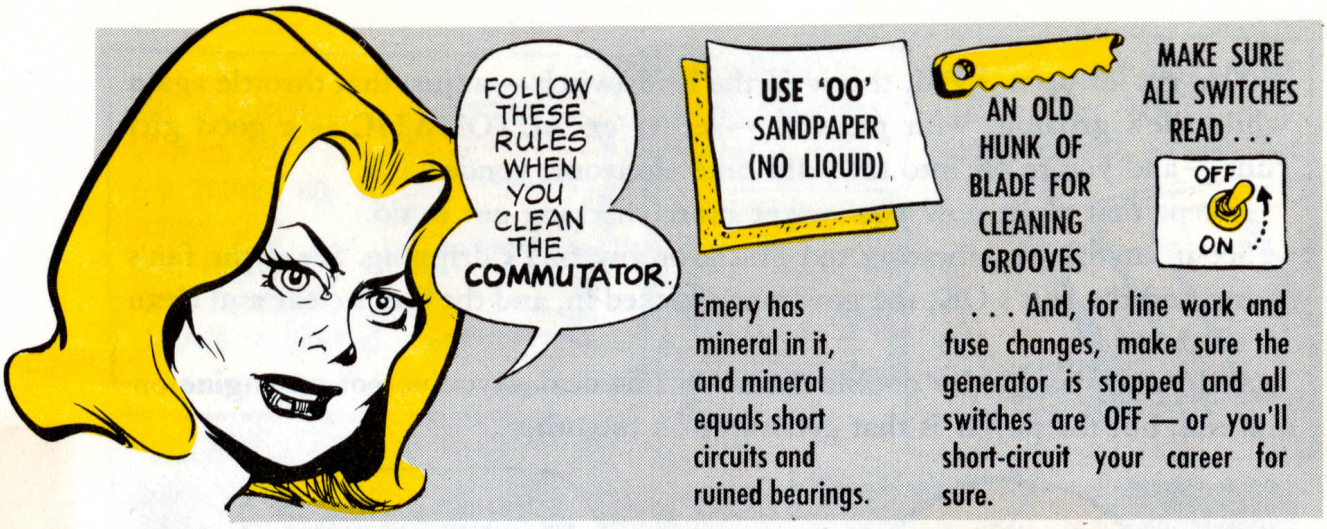
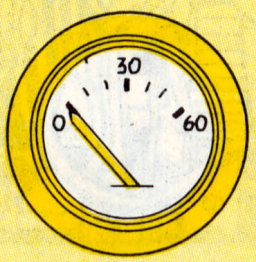
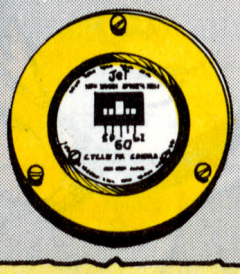


Now, since you can't see inside that engine, or juice grinder, you've got a set of detectives snooping there for you. They look where you can't, and report back to you. Just scan that instrument board — you might see:

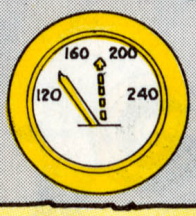
OIL PRESSURE GAGE — Slow drop indicates leak or overheating; jumpy reading indicates pump failing or supply low.



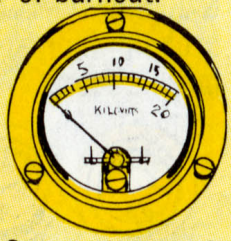
FREQUENCY METER — Jump shows overspeeding; drop warns power failing; jerky run can indicate bad clutch.



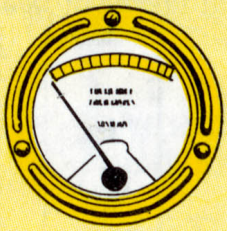
WATER TEMPERATURE GAGE — Sharp rise shows leak or pump failure; drop warns breakdown coming.



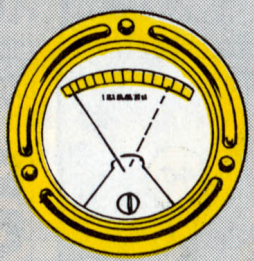
WATTMETER — Loss of rate indicates danger of burnout.



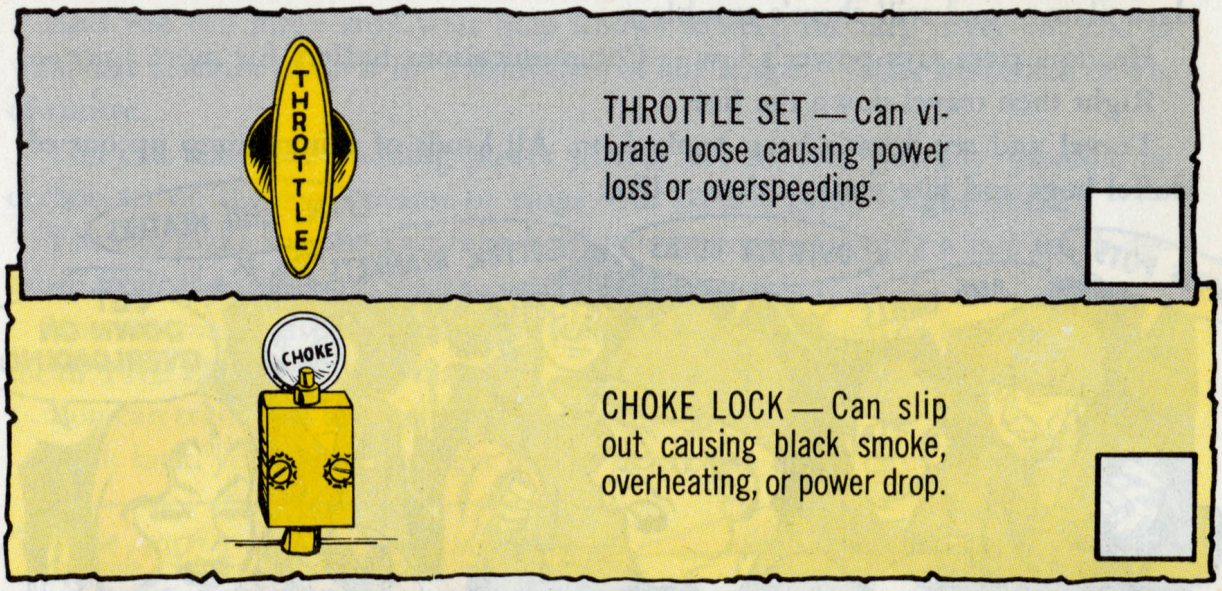
AMMETER — Drop shows underspeeding, equipment trouble; jumpy run shows short or burnout.



VOLTMETER — Drop warns of overload; surge shows bad balance.



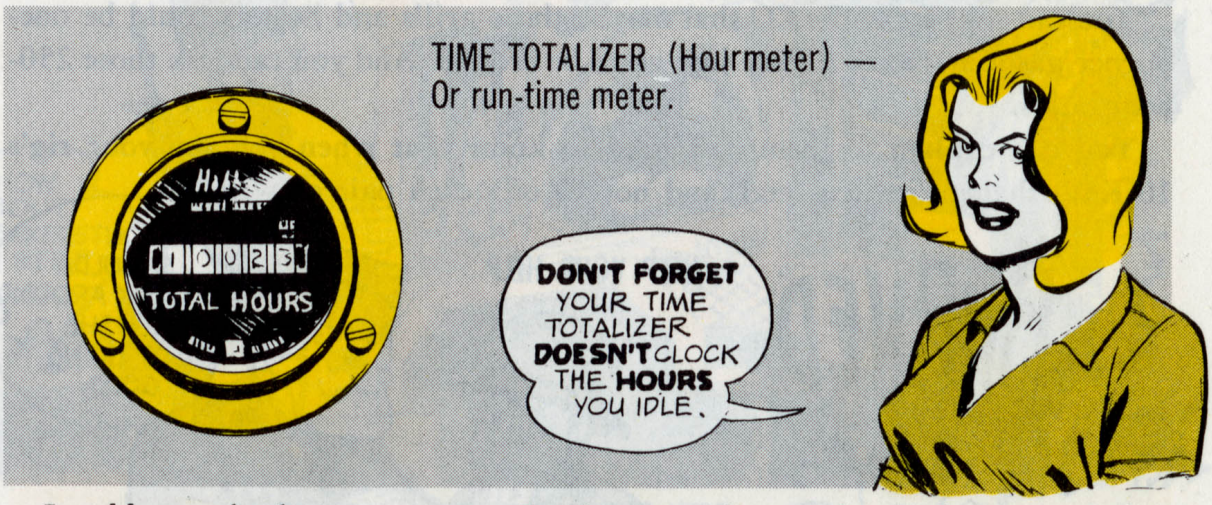
If you find 'em out of sorts with each other, a quick engine check is in order. Look at—



Once you see a little smoke or hear a funny noise, you can't ignore it.

'Course that noise could come from a bum muffler rusted out, but if you don't find out quick, sound the gong for support.

You've got another little helper around, too. It's called—



It adds up the hours you run. It gives you the word on when you oughta change that oil and oil filter, put new innards in the air cleaner, and clean that fuel screen—only you gotta watch the figures.

Supposin' the roof doesn't fall in, though—don't let success swell your head.

Right when you think you've got it shaded, back off and look—

Like stand back a little and see if your rig's still sitting level. People just stompin' around could make it settle.

If it slopes, the oil pump can starve out, or one end of the engine gets no oil and burns up. Or there's strain on the bearings, and out goes one.

The smaller the generator the more often you must check your oil level.

P.S. MORE

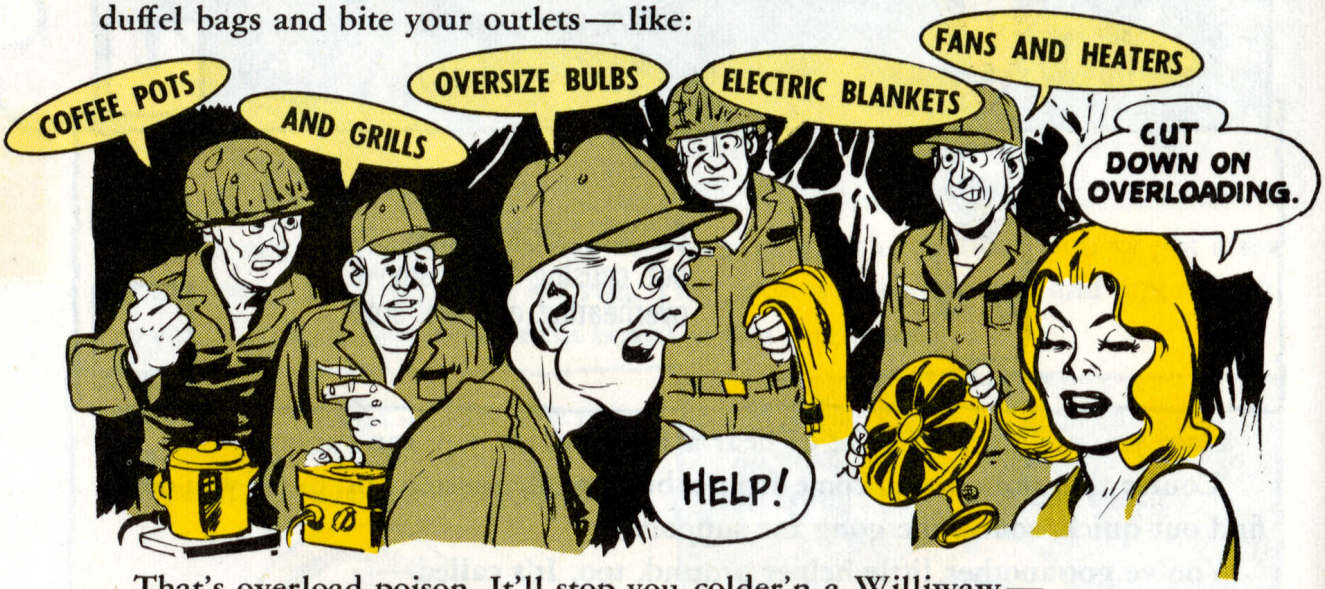
LOOK BEHIND YOU

But maybe you checked the whole business, your RPM's are strictly by the data plate—and still there's trouble—

Headquarters says power's low—Communications hollers for more juice—

Right then travel down the line.

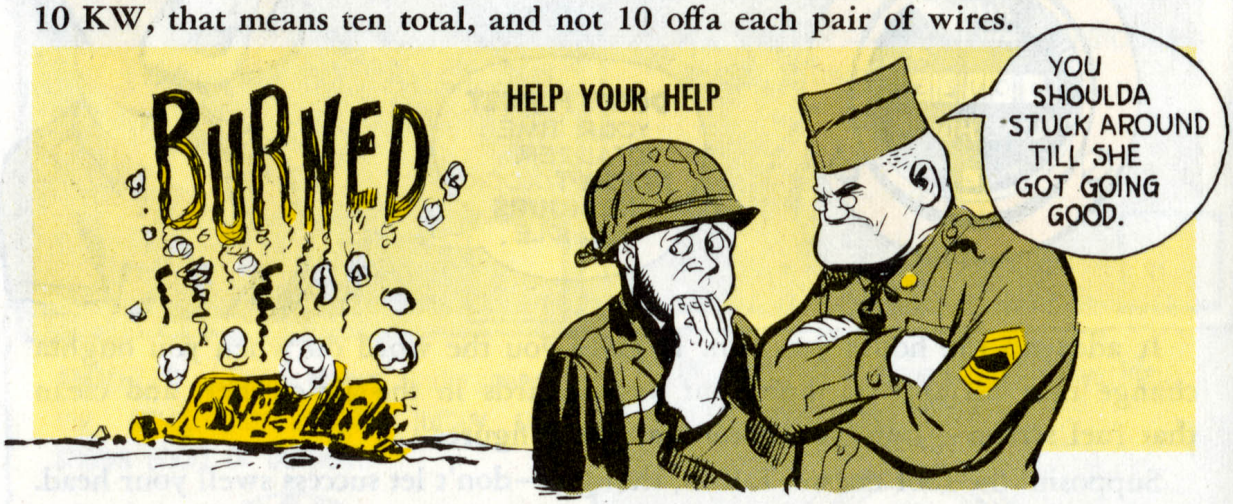
Travel and see what's been hooked on. All kinds of things jump up out of duffel bags and bite your outlets—like:



That's overload poison. It'll stop you colder'n a Williwaw—

You can suggest to the CO that maybe those grills and heaters could be one-burner gasoline pieces if they just gotta be around. And you can jerk those 250-watt bulbs.

You can explain to them that need to know that when you say your rig's 10 KW, that means ten total, and not 10 offa each pair of wires.



Sharing savvy with your relief may just keep you from having to take back a pile of junk. And remember the outfit might have to move and reconnect when you're not around. So—

Make sure he knows to never start with the circuit-breaker switch or the load switch "On." In fact, those 28-volt communications generators are plumb guaranteed to burn out every time if you don't cut that breaker switch to OFF, and

stay there with it till she's going good—

Like you don't start your car with the clutch in and the gear handle in high—

And you can make sure your help knows to keep the tarp cover on, and to wrap the machine up in it for a shutdown of any length—after it's cooled down, of course.

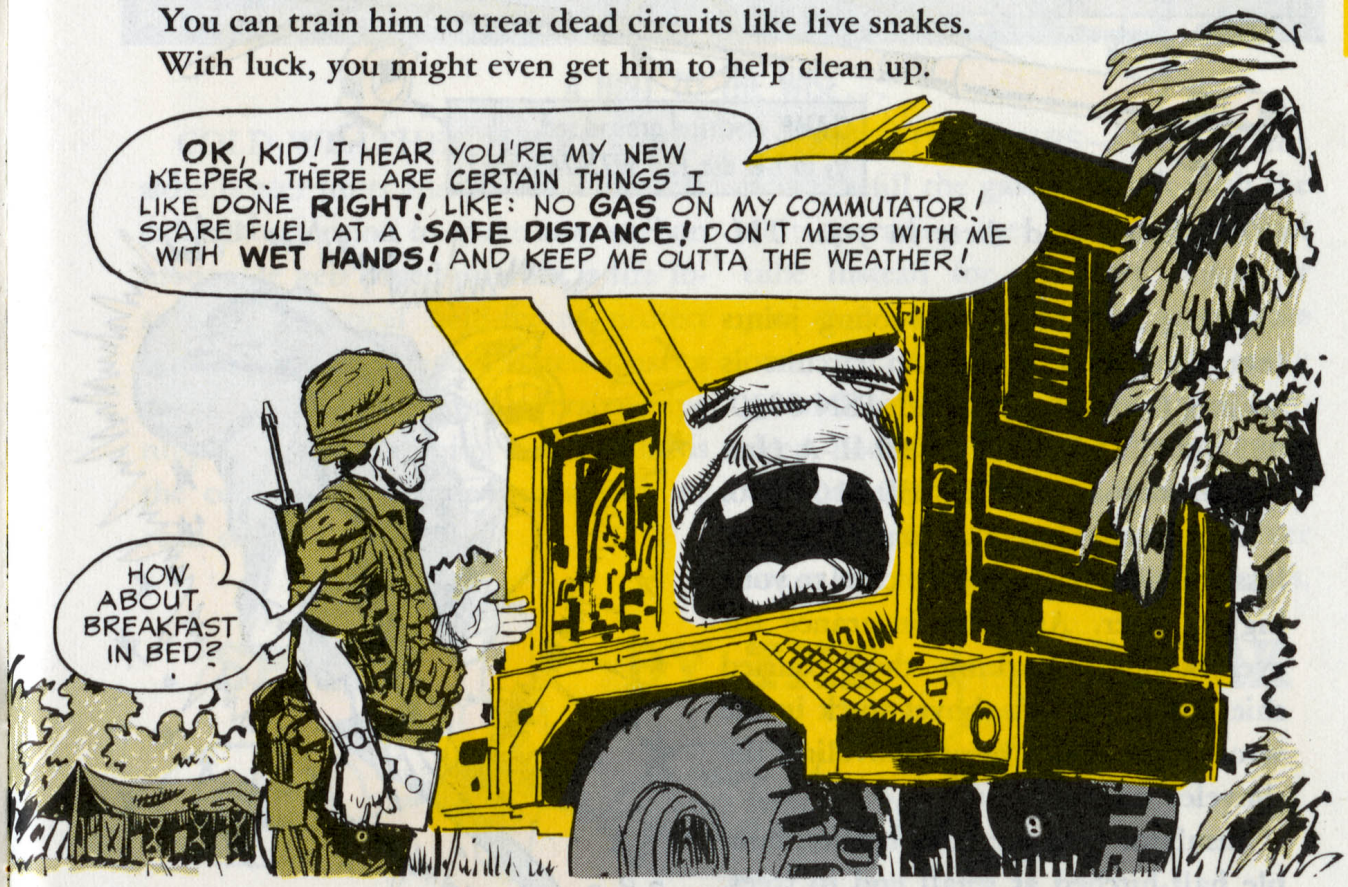
You can teach the budding power genius not to ever put any gasoline or carbon tet on the commutator or rings—or on any other bright metal.

You can make sure he knows to keep your spare fuel supply a safe spark distance from the rig—and under cover from the weather.

You can make sure he knows wet feet and hands—damp on both ends—can mean THE END, for him, that is.

You can train him to treat dead circuits like live snakes.

With luck, you might even get him to help clean up.



THERE'S TREASURE HERE

Besides the TM's that came with your rig, there's others that can make you a real power man.

TM 5-766 Electric Power Generation (Jul 65) and TM 5-765 Electrical Power Transmission (Jan 57) will give you info on wire size.

Like you hafta get 120 volts 3-phase 33 amps carried 250 feet. With these TM's figures, you'll know why you gotta have No. 8 for the "live" lines, and for neutral, too.

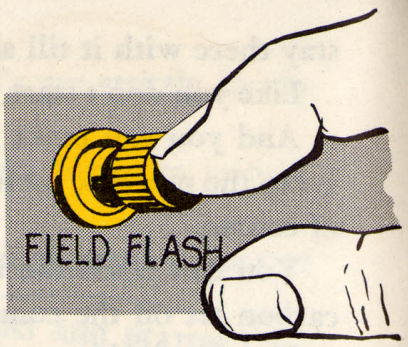
If you're stateside, better check TB 5-6100-201-15 (21 Jan 66), 'cause it gives you the scheduled replacement of generator sets.

PS MORE

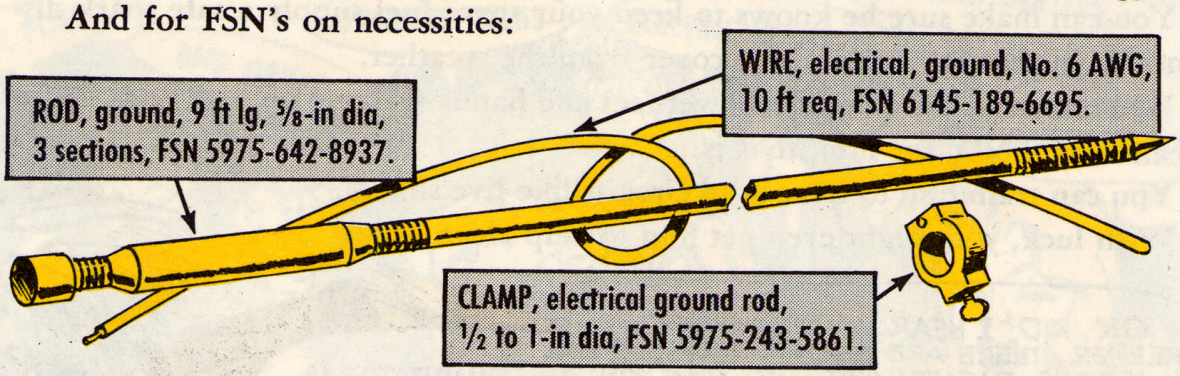
SOME HELPFUL HINTS

If you've unwrapped the rig, done a standard start—and no juice, no slurp, nothin'—

That's the time to reach for the switch labeled "Flash Field," or vice versa. Often's not, it works. That field magnetism gets weak in bad weather shutdowns, and the button just shoves a spark back through the works.



And for FSN's on necessities:



(You should find these in your TM-10's.)

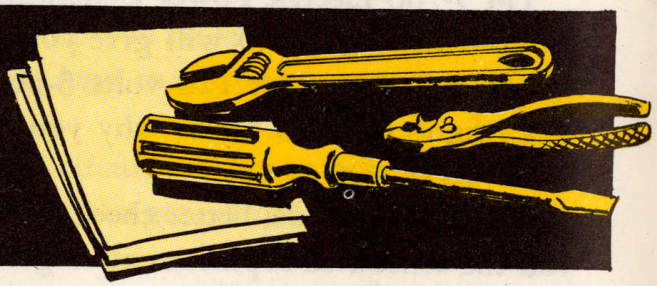
A big help in waterproofing joints (not the Ginza kind) and circuits is Sealing Compound, Liquid, FSN 8030-983-5062, DoD Cat C-8000-IL-A (Jan 66). Paste form is FSN 8030-616-7696.

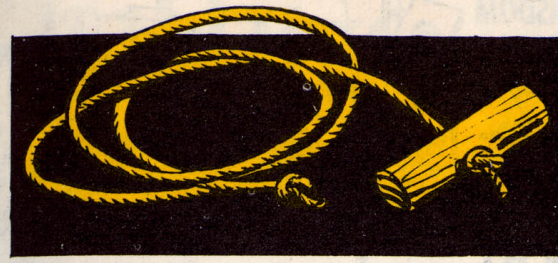
A common sense way to save electric loss and wire is cozying up close to your biggest user. And life insurance for everybody is marking those buried shielded cables—a shovel stuck in the wrong spot could mean shoveling the shoveler under.

Insulator field fix: coke bottles, double half-hitched at small end to trees, power line tied to pinch-waisted part (18 feet high at least!)—

Here're some take-along items that will be good to have with your rig:

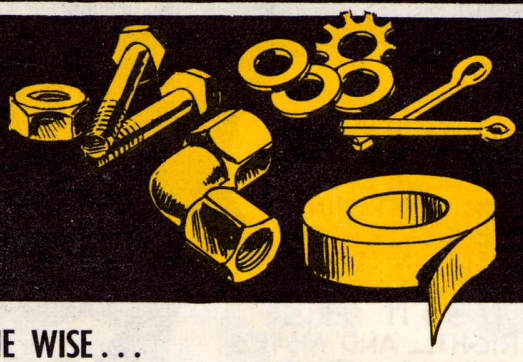
TOOLS — Handy — screwdriver, wrenches, oil cans, 00 sandpaper, a router to get dirt out of commutator insulation cracks, wire-handling pliers, hammer if available. The router can be made from a worn-out ignition-point file or used hacksaw blade.





STARTING ROPE OR CRANK — Smaller units not equipped with electric starter should have sash-cord starting rope, with handle, or equal. If L-type crank is required but missing, higher-echelon shops can fabricate.

SPARE PARTS — Not required, but handy, is a small supply of bolts, studs, lockwashers, cotter pins, a fuel-line ell, tee, and nut or two, and if your outfit uses 'em a handful of spring-steel snap-type "slotted" washers. A neat little container in the toolbox will safeguard and maintain order. And remember plastic tape!

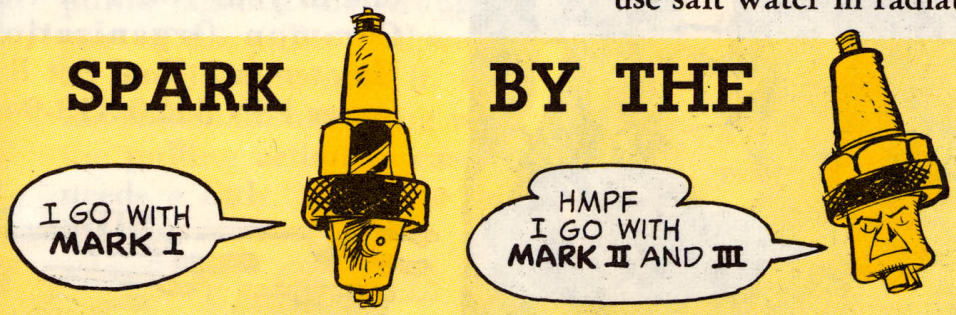


A HINT TO THE WISE...

COLD-WEATHER HELPS — Besides heater units and covers, a flexible exhaust extension to make sure carbon monoxide gets piped **outside** is life insurance. Practical field-fix to protect canvas around exhaust extensions: a piece of cast iron pipe, oversize pipe nipple, or pipe-shipping collar. And is the cold making your gages stick or read crazy?

HANDLING TIPS—Never, but never, refill the gasoline tank with the unit operating (get an extension fuel tube instead for auxiliary supply if you can, and if you have to operate over extra-length stretches). In rocky ground, where ground rods won't go deep, pour water around the rod every day, or poke the rod in a crack between rocks to get at ground moisture. Never use salt water in radiators or batteries.

SPARK BY THE MARK



Puzzled over spark plugs for 1½-HP and 3-HP military standard engines? Here's a straightener-upper.

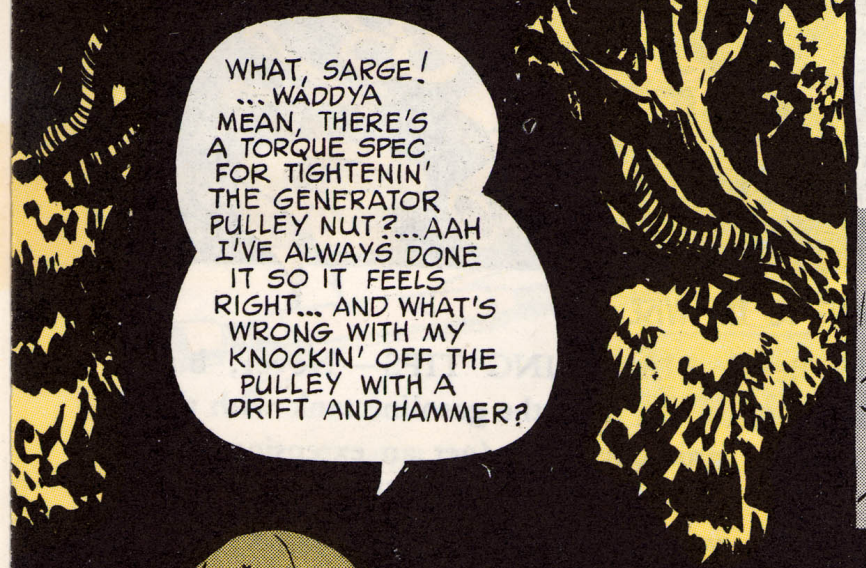
There are two plugs used in the six models. Like so—

SPARK PLUG	FITS ENGINES
FSN 2920-293-5212	All Mark I, both 1A08-1 and 2A016-1 Models.
FSN 2920-810-7082	All Mark II and Mark III, Models 1A08-2, 1A08-3, 2A016-2, and 2A016-3.

In other words, the Mark I models of the 1½- and 3-HP engines use one type of spark plug, and all other models of both sizes use a different type.

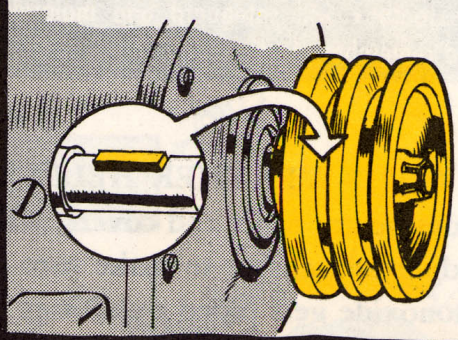
NUTS 'N

GROUND MOBILITY



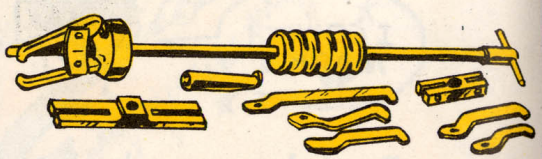
"Siddown, Private Murphy, and learn somethin'. It says right in TB 9-2300-225-20 (Dec 59) to tighten the nut to 35-to-40 ft-lbs torque when installing pulleys on replacement Auto-Lite AL-GHA 4802UT and Delco-Remy 1117495 generators.

"But you don't start tightenin' until you're sure the Woodruff key, pulley and nut are seated nice 'n' snug 'n' straight on the shaft.



1

"Now, there's only one right way to get the pulley off the generator shaft. Your TM says to use a 'suitable puller'—and that puller's the one in your No. 1 or No. 2 Common Organizational Maintenance Tool Set listed under FSN 5120-313-9496.



4

GROUND MOBILITY

GEMS OF WISDOM ON GENERATORS

NUTS 'N' PULLEYS

WHAT, SARGE! ...WADDYA MEAN, THERE'S A TORQUE SPEC FOR TIGHTENIN' THE GENERATOR PULLEY NUT?...AAH I'VE ALWAYS DONE IT SO IT FEELS RIGHT... AND WHAT'S WRONG WITH MY KNOCKIN' OFF THE PULLEY WITH A DRIFT AND HAMMER?

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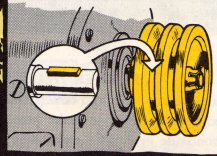

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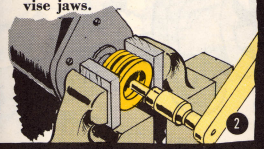
"And be mighty careful how you hold the pulley while puttin' the torque wrench to the nut or you can bust chunks out of the pulley. You can hold the pulley in a vise if you use wooden blocks between the pulley and the vise jaws.



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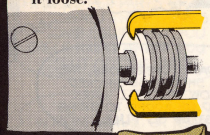
"You use the three-jaw setup that gets all the way behind the pulley—not just into the first or second groove. That way you'll be pullin' against the strongest part of the pulley and won't be so likely to bust it. Use the slide hammer along with the pulling action in case it needs a little jarring to get it loose.



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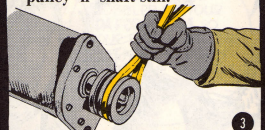

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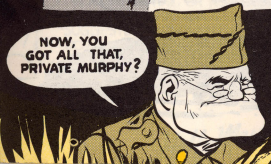
"Treat that li'l ole' generator pulley like you would a new girl friend—gent-tul! It's a small part of your vehicle, but if it's got pieces broken out of it—or is even nicked—it'll chew up the drive belts. Then, dependin' on what sort of a setup you've got, it's quittin' time for your generator, water pump and air compressor—and that means quittin' time for your vehicle."

6



PULLEYS

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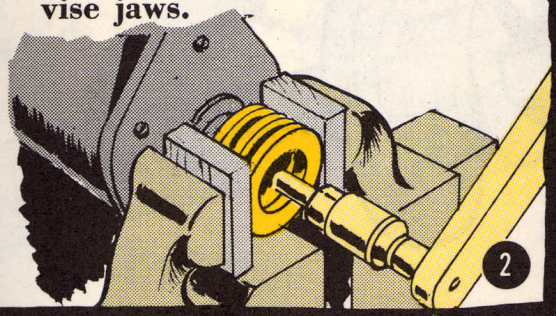

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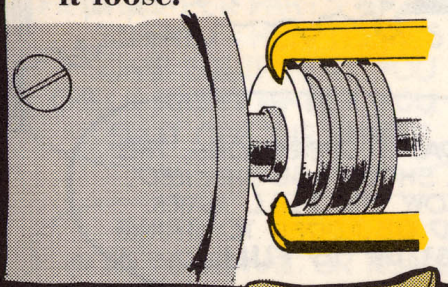

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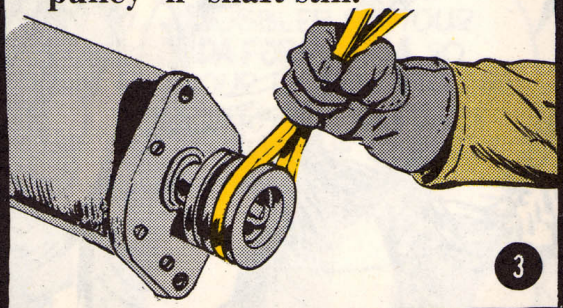

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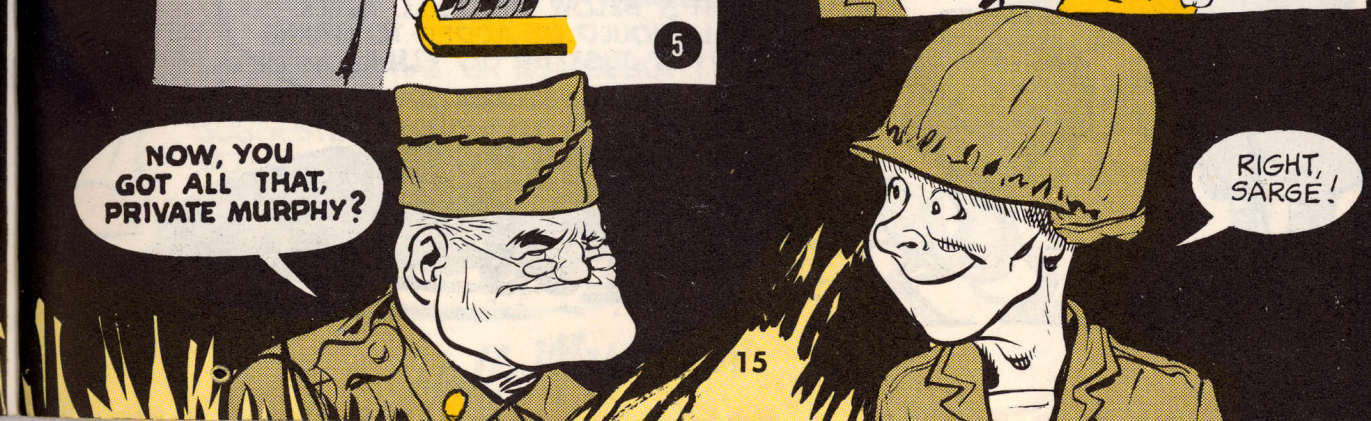
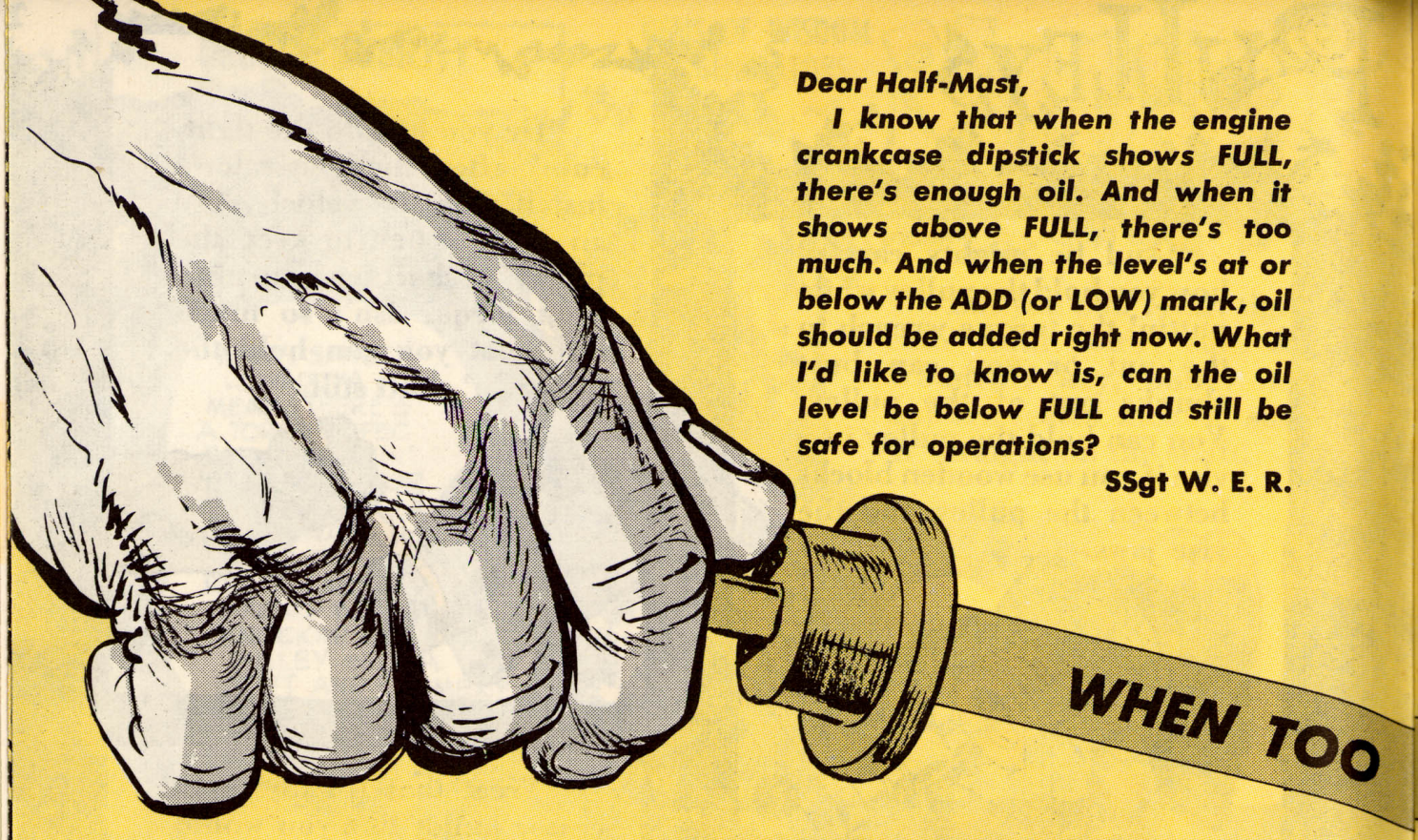
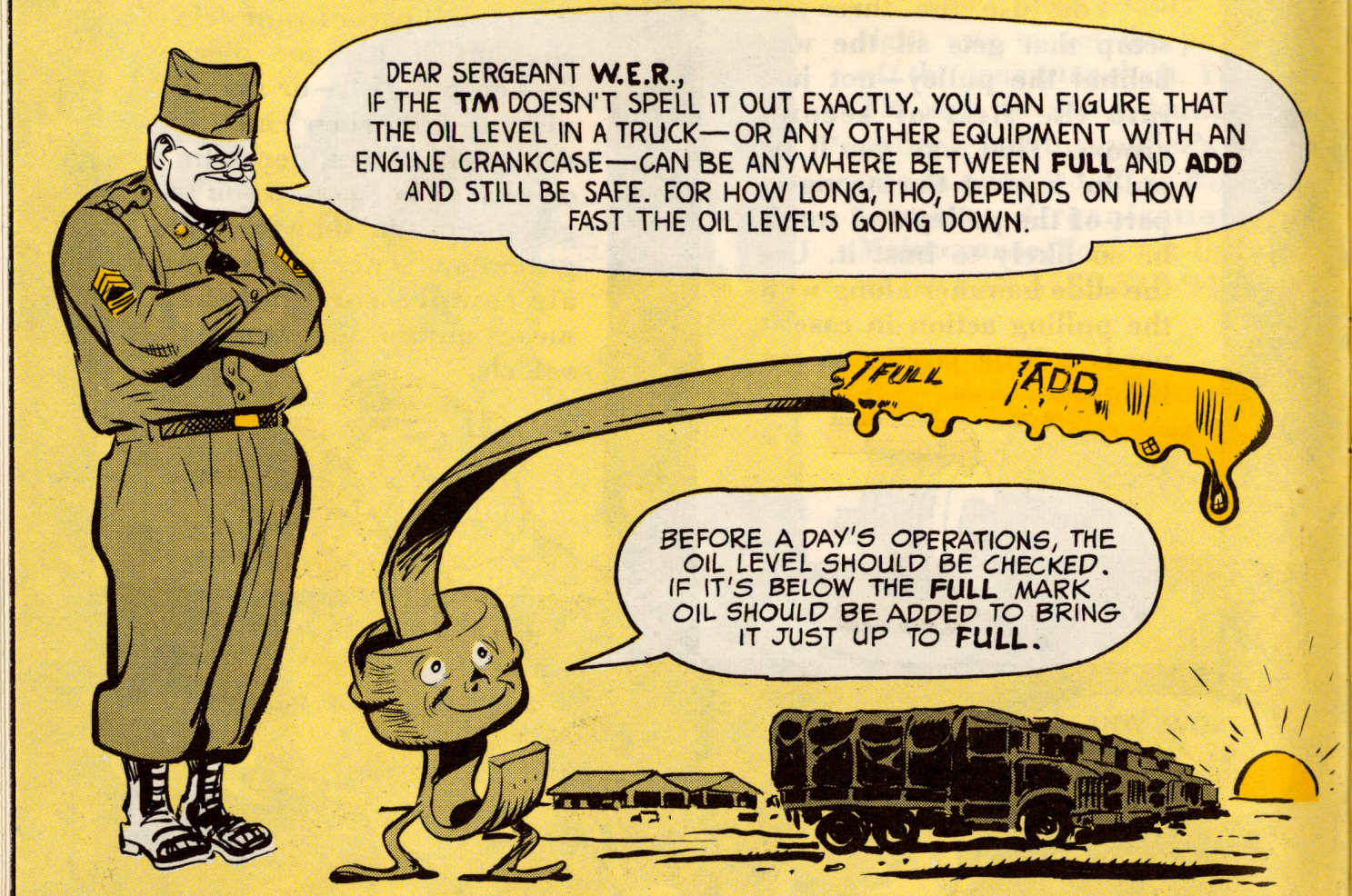


Dear Half-Mast,

I know that when the engine crankcase dipstick shows FULL, there's enough oil. And when it shows above FULL, there's too much. And when the level's at or below the ADD (or LOW) mark, oil should be added right now. What I'd like to know is, can the oil level be below FULL and still be safe for operations?

SSgt W. E. R.





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WHEN TOO LOW?

DEAR SERGEANT **W.E.R.**,
IF THE **TM** DOESN'T SPELL IT OUT EXACTLY, YOU CAN FIGURE THAT THE OIL LEVEL IN A TRUCK—OR ANY OTHER EQUIPMENT WITH AN ENGINE CRANKCASE—CAN BE ANYWHERE BETWEEN **FULL** AND **ADD** AND STILL BE SAFE. FOR HOW LONG, THO, DEPENDS ON HOW FAST THE OIL LEVEL'S GOING DOWN.

FULL ADD

BEFORE A DAY'S OPERATIONS, THE OIL LEVEL SHOULD BE CHECKED. IF IT'S BELOW THE **FULL** MARK OIL SHOULD BE ADDED TO BRING IT JUST UP TO **FULL**.

THE OIL LEVEL SHOULD BE CHECKED DURING OPERATIONS TOO--EVEN SEVERAL TIMES A DAY IF YOUR EQUIPMENT IS WORKING HARD OR DOING A LOT OF TRAVELING. IF THIS CHECK SHOWS THE LEVEL HAS DROPPED, DON'T BOTHER ADDING OIL UNLESS IT'S GONE DOWN MORE THAN HALF-WAY BETWEEN **FULL** AND **ADD**.

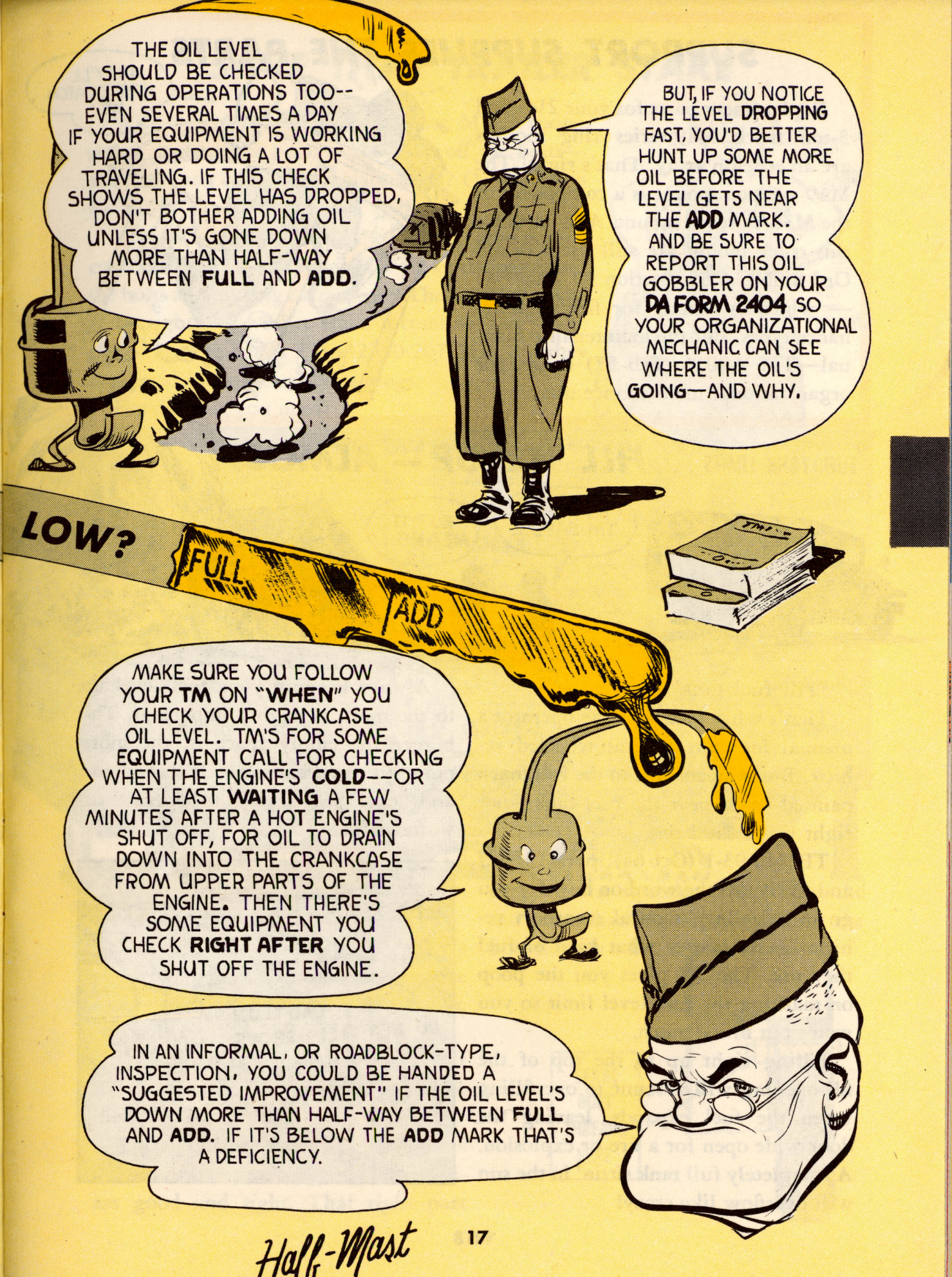
BUT, IF YOU NOTICE THE LEVEL **DROPPING** FAST, YOU'D BETTER HUNT UP SOME MORE OIL BEFORE THE LEVEL GETS NEAR THE **ADD** MARK. AND BE SURE TO REPORT THIS OIL GOBBLER ON YOUR **DA FORM 2404** SO YOUR ORGANIZATIONAL MECHANIC CAN SEE WHERE THE OIL'S GOING—AND WHY.

FULL ADD

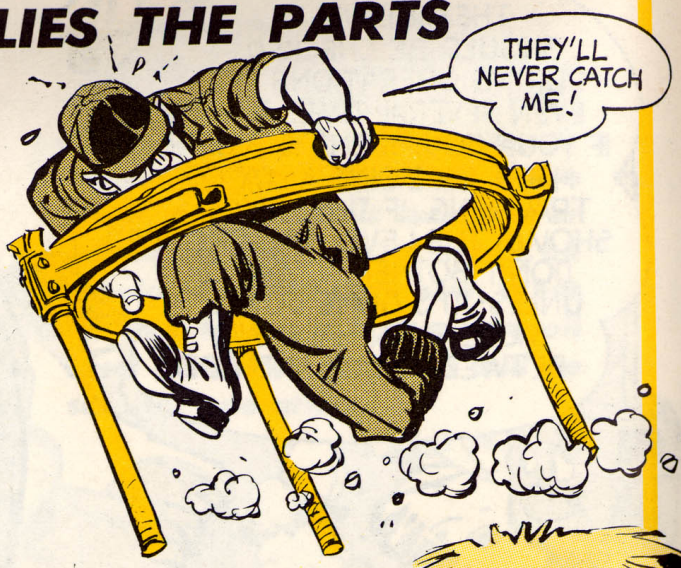
MAKE SURE YOU FOLLOW YOUR **TM** ON "**WHEN**" YOU CHECK YOUR CRANKCASE OIL LEVEL. TM'S FOR SOME **EQUIPMENT** CALL FOR CHECKING WHEN THE ENGINE'S **COLD**--OR AT LEAST **WAITING** A FEW MINUTES AFTER A HOT ENGINE'S SHUT OFF, FOR OIL TO DRAIN DOWN INTO THE CRANKCASE FROM UPPER PARTS OF THE ENGINE. THEN THERE'S SOME EQUIPMENT YOU CHECK **RIGHT AFTER** YOU SHUT OFF THE ENGINE.

IN AN INFORMAL, OR ROADBLOCK-TYPE, INSPECTION, YOU COULD BE HANDED A "SUGGESTED IMPROVEMENT" IF THE OIL LEVEL'S DOWN MORE THAN HALF-WAY BETWEEN **FULL** AND **ADD**. IF IT'S BELOW THE **ADD** MARK THAT'S A DEFICIENCY.

Half-Mast

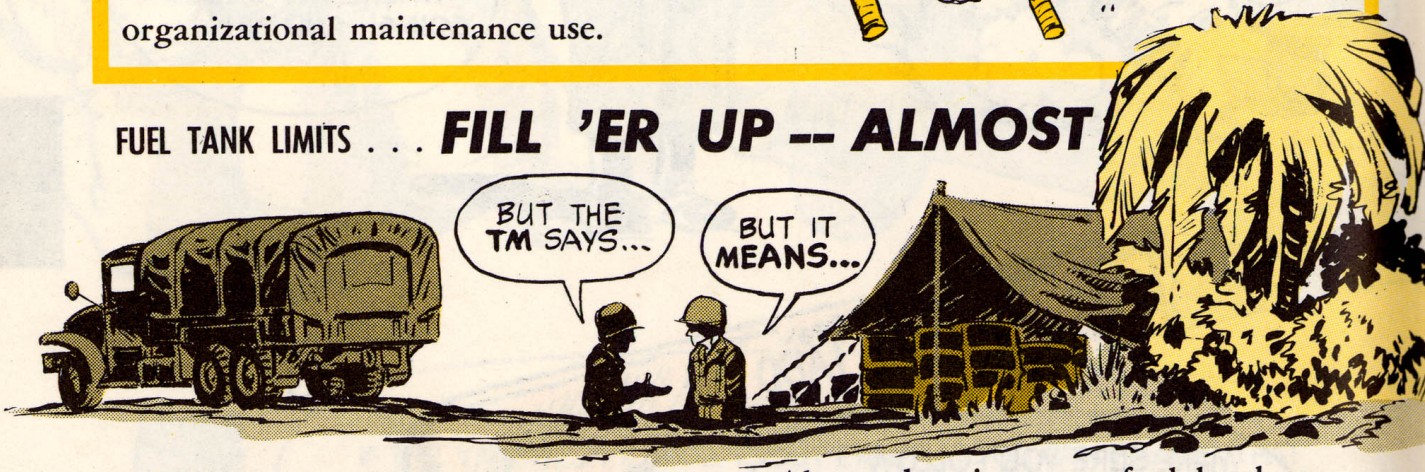

THE OIL LEVEL SHOULD BE CHECKED DURING OPERATIONS TOO--EVEN SEVERAL TIMES A DAY IF YOUR EQUIPMENT IS WORKING HARD OR DOING A LOT OF TRAVELING. IF THIS CHECK SHOWS THE LEVEL HAS DROPPED, DON'T BOTHER ADDING OIL UNLESS IT'S GONE DOWN MORE THAN HALF-WAY BETWEEN **FULL** AND **ADD**.
BUT, IF YOU NOTICE THE LEVEL **DROPPING** FAST, YOU'D BETTER HUNT UP SOME MORE OIL BEFORE THE LEVEL GETS NEAR THE **ADD** MARK. AND BE SURE TO REPORT THIS OIL GOBBLER ON YOUR **DA FORM 2404** SO YOUR ORGANIZATIONAL MECHANIC CAN SEE WHERE THE OIL'S GOING—AND WHY.
LOW?
FULL
ADD
MAKE SURE YOU FOLLOW YOUR **TM** ON "**WHEN**" YOU CHECK YOUR CRANKCASE OIL LEVEL. TM'S FOR SOME EQUIPMENT CALL FOR CHECKING WHEN THE ENGINE'S **COLD**--OR AT LEAST **WAITING** A FEW MINUTES AFTER A HOT ENGINE'S SHUT OFF, FOR OIL TO DRAIN DOWN INTO THE CRANKCASE FROM UPPER PARTS OF THE ENGINE. THEN THERE'S SOME EQUIPMENT YOU CHECK **RIGHT AFTER** YOU SHUT OFF THE ENGINE.
IN AN INFORMAL, OR ROADBLOCK-TYPE, INSPECTION, YOU COULD BE HANDED A "SUGGESTED IMPROVEMENT" IF THE OIL LEVEL'S DOWN MORE THAN HALF-WAY BETWEEN **FULL** AND **ADD**. IF IT'S BELOW THE **ADD** MARK THAT'S A DEFICIENCY.

SUPPORT SUPPLIES THE PARTS



Replacement parts for your 2½- and 5-ton truck M49-series ring mounts are an echelon away. That's right! The M49 weapon mount is a component of the M36A1 truck mount. And parts for this truck mount are still listed in old Ord 8 SNL A-55, Section 50 (Mar 54) — which is strictly for field maintenance types. But the maintenance manual—TM 9-2016 (Feb 57) is OK for organizational maintenance use.

FUEL TANK LIMITS . . . FILL 'ER UP -- ALMOST



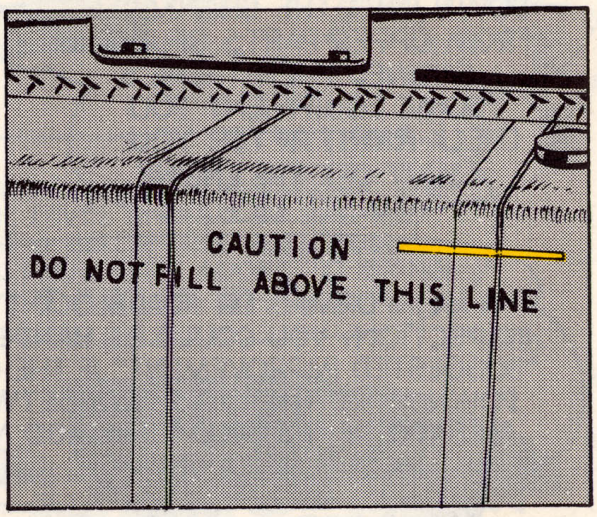
"Fill fuel tank"

That's what it says in the operator's manual for your tactical wheeled vehicle. But it means just to the full mark painted on or near the fuel tank—not right up to the brim.

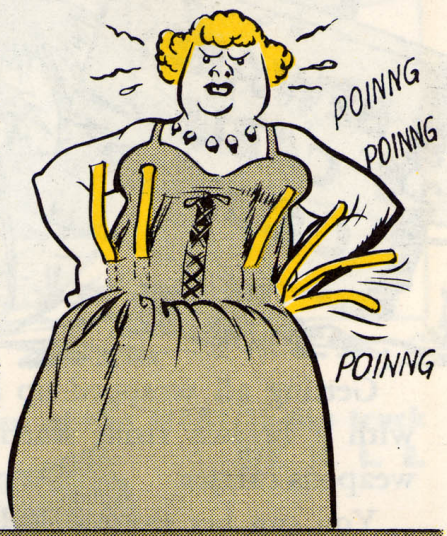
TB 746-93-1 (Oct 64), para 13f (2) and (3) is still the word on how far you go in refueling "tactical transport vehicles"—no matter what kind of fuel they use. The TB gives you the poop on marking the fuel level limit so you won't put in too much.

Filling right up to the top of the fill opening will amount to overfilling when the fuel expands, leaving the door wide open for a fire or explosion. A completely full tank sittin' in the sun will overflow like crazy!

Always keeping your fuel level up to the mark is mighty important. The bigger the empty space is, the more moist air can accumulate. It'll condense and leave you trying to operate on watered fuel.



SAVE THAT TRAILER STAKE



Wish you could burn those loose M127 trailer stakes at the stake because they pop off the bolts—and then you can't find replacements? Or you got a fix and it happened all over again?

There's a cure for that. Part of the prescription comes from keeping the wood from swelling against the bolts and causing extra strain. The rest of the dose is the right bolt-washer-and-nut combo—and you're right. They're not in TM 9-2330-207-24P. But they are listed in DoD supply catalogs.

Here's what you need:

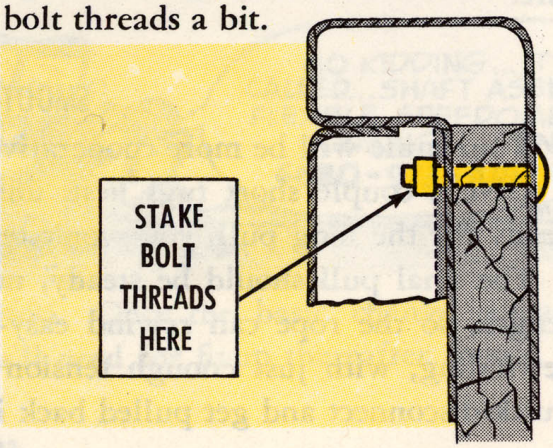
Item	IN CATALOG	Use On
Bolt, FSN 5306-225-9081	C5306-IL-A, CB7	Top Boards
Bolt, FSN 5306-012-0231	C5306-IL-A, CB7	Top Boards
Lockwasher, FSN 5310-012-0214	C5310-IL-A, Sep 64	Both Places
Nut, FSN 5310-543-2629	C5310-IL-A, Sep 64	Top Boards
Bolt, FSN 5306-225-8499	C5306-IL-A, CB7	Side Boards
Nut, FSN 5310-298-9073	C5310-IL-A, Sep 64	Side Boards

But before you slap in the new bolts, whoa up a minute.

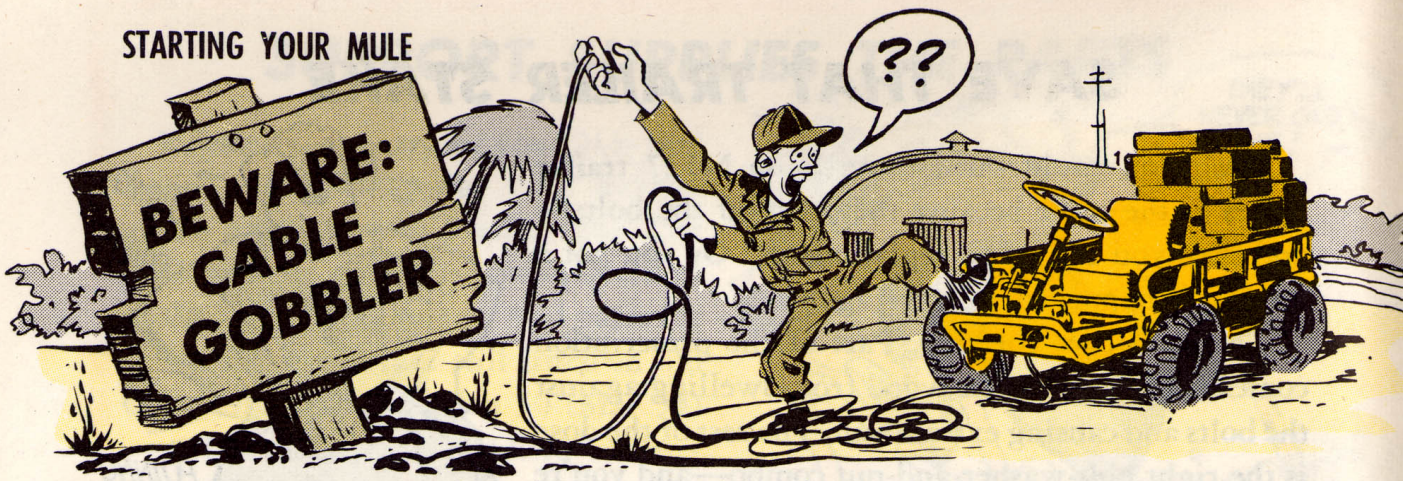
Line up your holes, and see there's plenty of room. Otherwise, drill out the holes with a bit—just so they're cleaned out.

Space each board with shims about 1/16 of an inch before you drill, and make the holes straight.

Then you can shove the new parts in, and draw up nuts against lockwashers good and tight. That tight part keeps down squeaks. Then keep the nut from backing off by staking the bolt threads a bit.



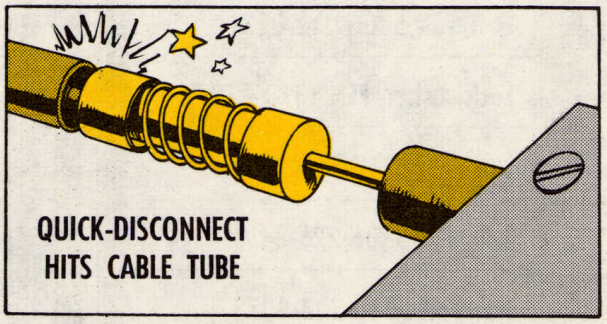
STARTING YOUR MULE

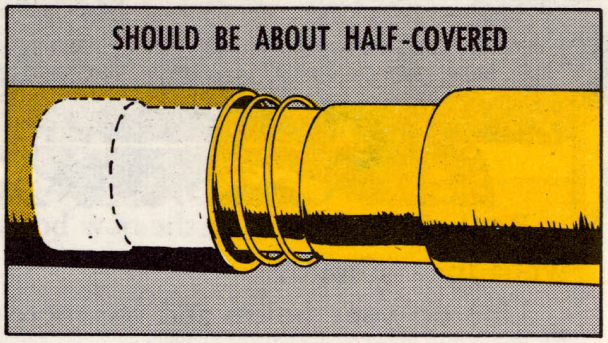


Getting all wrapped up in your work can be good—but not when you tangle with a broken front starting cable from your M274 or M274A1 ½-ton light weapons carrier.

You can bet the quick-disconnect that couples the front and back cables has been clipping the end of the front cable tube. Maybe you've even felt the catch everytime you gave the starter cable a pull. The cable end finally gets tired of this rough treatment and just breaks off.

All you have to do is make sure the cable tube is adjusted — extended farther toward the rear — so the quick-disconnect is about half-covered by the tube. Then it won't hit the tube end because it'll already be part way inside the tube.





And the whole works — cable ends and quick-disconnect—will last longer, too, if some powdered graphite is shot in there once in a while. The same treatment at the front, where the cable rubs against metal, will make for a smoother cable pull and longer cable life.

SMOOTH 'N' EASY

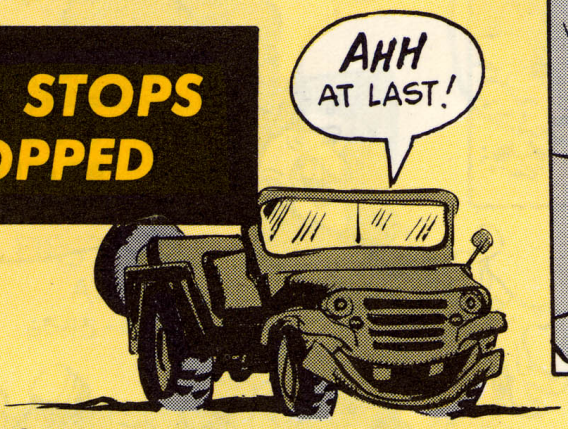
Your mule will be more cooperative about starting if you use the right pull.

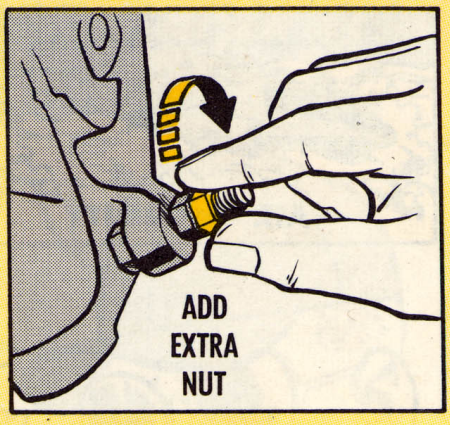
Give a couple short tugs first, until the dog engages. Then, when you're ready for the long pull, you won't tear things up.

The final pull should be steady, not jerky. And keep the pull within arm's length, so the rope can rewind easy-like. You want to keep hold when it's rewinding, with just enough tension so it won't kink up or slip free of the quick-disconnect and get pulled back into the pulley housing or starter housing.

M151 ¼-TON TRUCK . . .

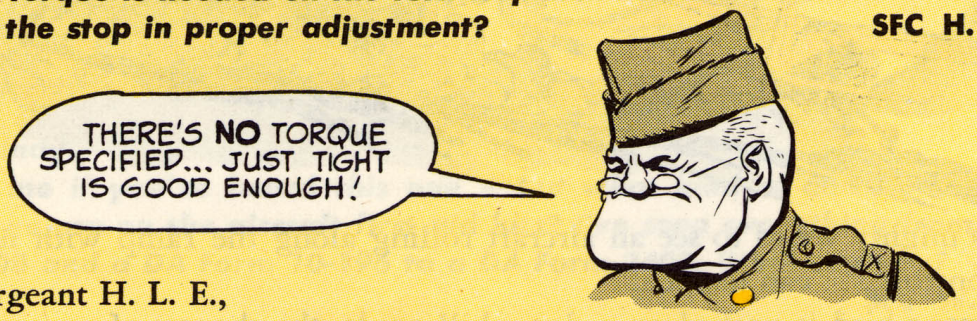
TURN STOPS STOPPED





Dear Half-Mast,

What torque is needed on the turn stop lock nut of the M151 ¼-ton truck to keep the stop in proper adjustment? **SFC H. L. E.**



Dear Sergeant H. L. E.,

If extra insurance is needed, what's recommended is another nut turned down tight against the lock nut.

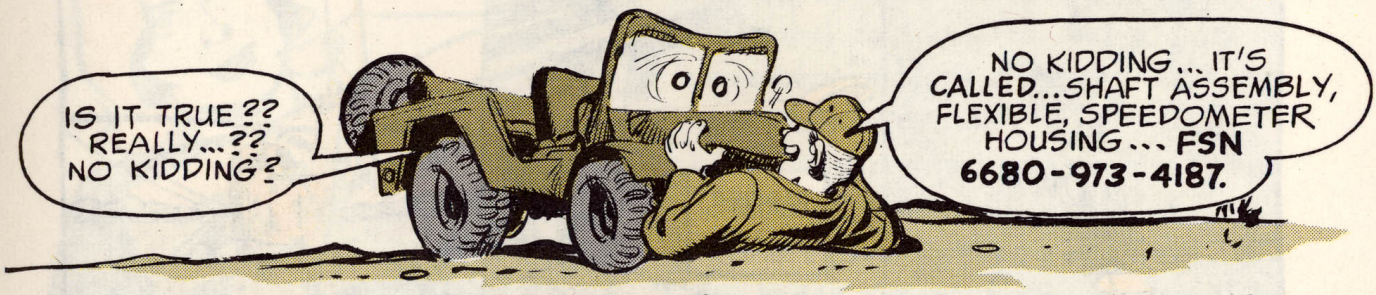
Or you can take a punch and upset the threads a little to stake the lock nut on the bolt.

Half-Mast

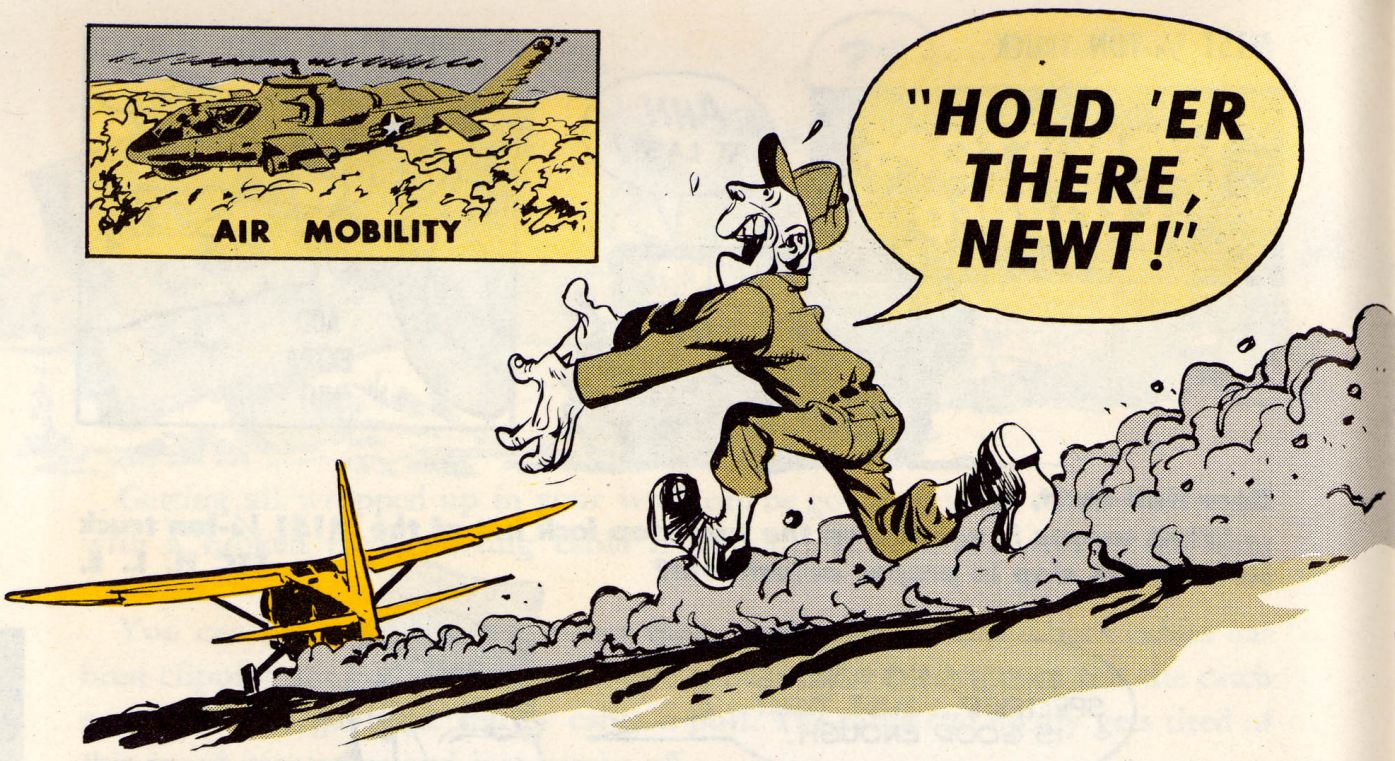
RIGHT TO THE CORE

Those sharp corners that mess up speedometer drives on M151 ¼-ton trucks need bother you no longer.

When you next need repair on that item, there's a smooth replacement with nylon undies ready to take over—a new, longer, nylon-lined shaft assembly that eliminates the need for the right-angle adapter coming out of the transfer case.



New cores come on FSN 2530-901-9685. Once the basic change is made on your vehicle, likely the only thing you'll need for fixup thereafter should be the core alone.



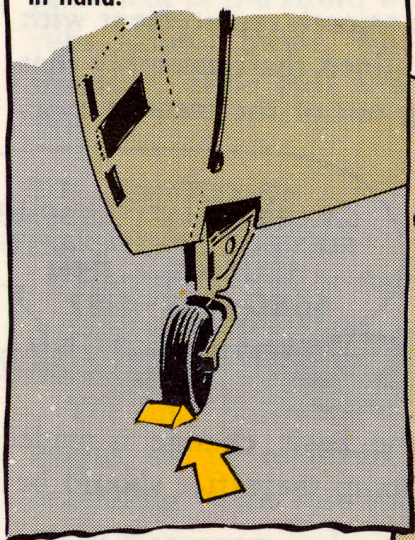
It's mighty weird to see an aircraft rolling along the ramp with nobody at the controls . . . can happen! !

If your bird is parked on a down-hill grade, the chances of an unscheduled flight are real. Add some of those not-so-gentle Spring breezes, even with the bird parked on level terra firma, and it'll really take off.

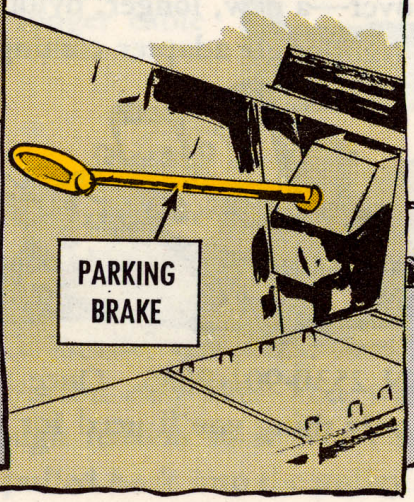
So how does the ground crewman prevent a loose bird from being put out of action because it strikes a truck, pole, hangar or another aircraft?

It's as easy as one, two, three.

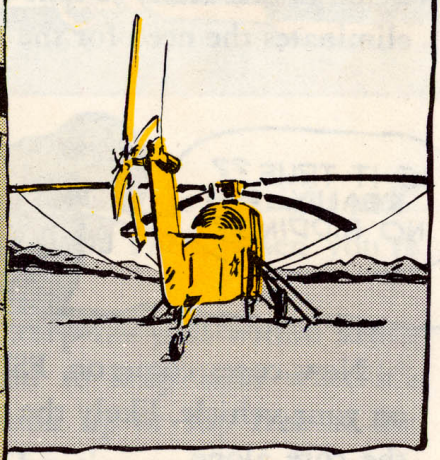
One — chock the wheels. When your bird comes in to roost, meet it with the chocks in hand.



Two — see that the parking brake is set. On big birds the pilot may want to let the brakes cool off and may not set the brakes.



Three — moor the bird. Use tie-downs when there's a chance you'll get the wind conditions given in the aircraft organizational maintenance pub.



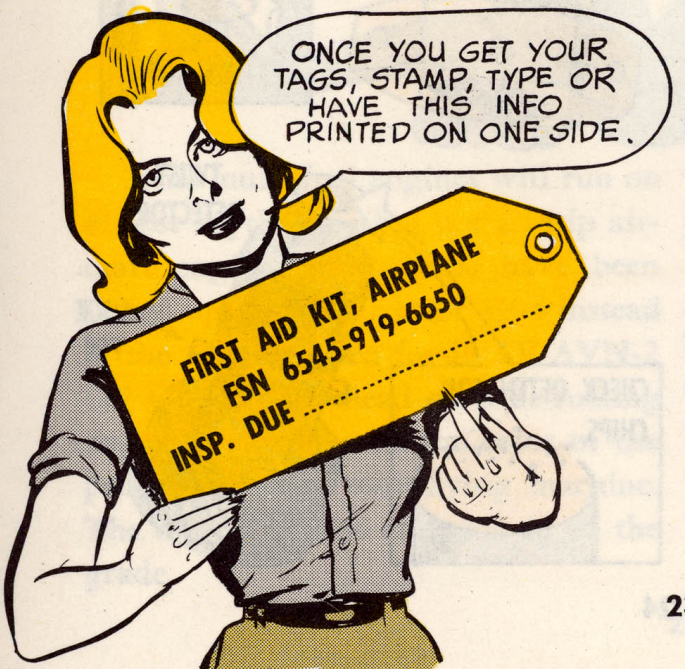
Dear Windy,

Stop me if you've heard this one — but what kind of an inspection tag should we use on the aircraft first aid kits? I've seen everything from an AF Form 50B and a DA Form 10-196 to a DA Form 2402. What say you?

SFC W. F. G.

Dear Sergeant W. F. G.,

I'd follow the first aid kit poop in TB AVN 10 (19 May 65) and use just a plain manila tag. The one you want, FSN 8135-292-2355, is a 2⅝-in by 5¼-in size and you'll find it listed in GSA Catalog (Jan 66) on Page 256 at $2.90 per thousand.



Write the inspection due date on the tag and attach it to the kit using the wire and lead seal — that's the poop in Section III, Para 9e of TB AVN 10.

Remember that the kit now gets inspected by the medics every year and all the TM's are being changed to reflect this.

If the kit seal is broken or if it doesn't pass inspection for any reason, turn the tag over and write the reason for the rejection. You also make with a red diagonal in block 16 and a suitable comment in block 17 of the DA Form 2408-13, sure 'nuff.

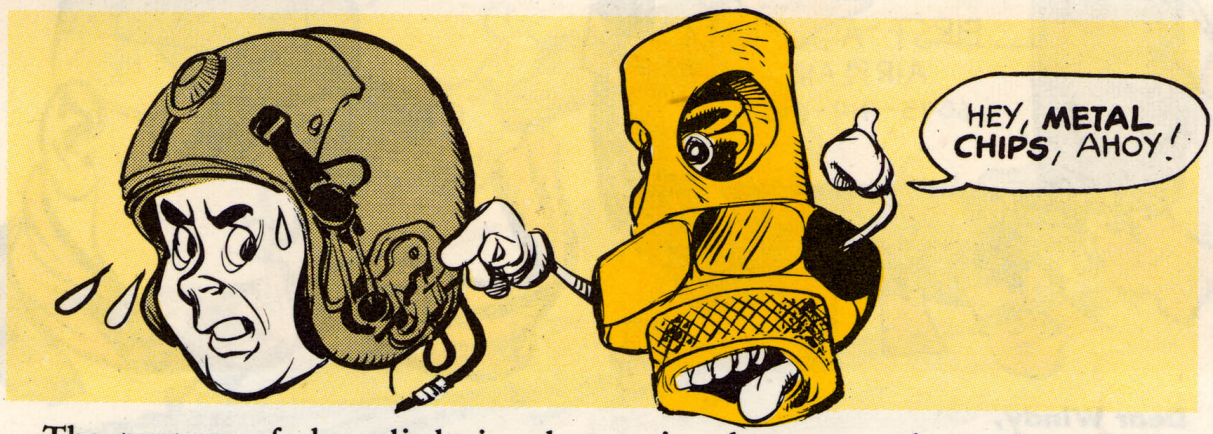
Hand carry the kit to the medics and exchange it on the spot. If you can't get an exchange, hang a DA Form 2402 exchange tag on the kit so it will be inspected and returned to you.

Windy

TO EYE THE CHIP DETECTOR PLUGS, JUST . . .

DO THE TWIST

Chip detectors have proven their worth in aircraft engines and transmissions. Small wonder, then, that they're now going into all the Huey (UH-1) 42-degree and 90-degree gear boxes — plus the transmission.



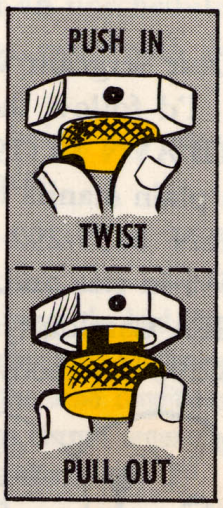
The purpose of these little jewels remains the same — the setting off of a warning light in the cockpit which alerts the pilot that some chips of metal have landed on the plug. Normally, this warning of an impending internal failure gives the pilot enough time to make a normal landing.

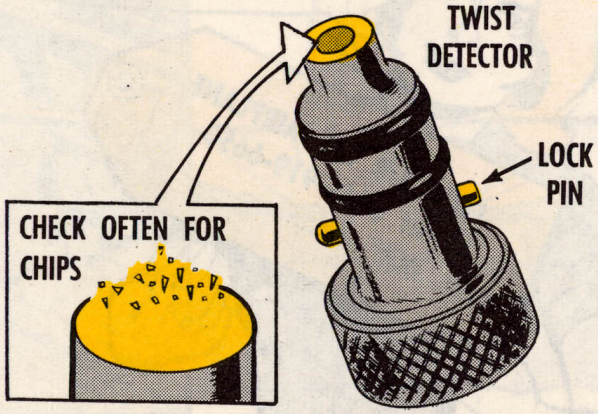
But there have been some welcome changes made on these Huey chip detectors as you'll see when you pull one.

You'll find the detector within the drain plug. So it's a pushover to check without any messy, time-wasting pulling of the drain plug.

To take out the detector just push the magnetic insert in as far as possible and twist it counterclockwise, to disengage the pins from the plug, and lift the insert from the plug. Disconnect the electrical wires from the insert. As the insert comes out, a spring-loaded check valve in the detector shuts off any flow of oil . . . clean, man, clean!

After you inspect the detector, put it back in the plug with a new O-ring and connect the electrical wires. Be mighty sure the O-ring is seated or a lost detector — and oil — will upset the apple-cart!!





NO TEST FLIGHT NEEDED

Dear Windy,

We changed a Seminole (U-8) governor cable and TB AVN 23-16 (10 Jun 65), on test flights and operational checks, posed an important question.

Para 4a(1)(h) says a test flight is needed when fixed or movable flight control surfaces, flight control linkage or cables have been replaced, removed and reinstalled or adjusted.

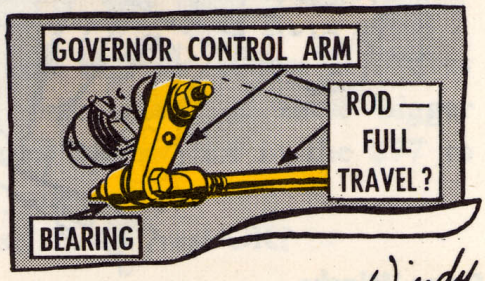
Tell me, Windy, is a governor cable considered a flight control cable which requires a test flight?

Sgt D. B. D.

Dear Sergeant D. B. D.,

Nossir-e-e. The cable is not in the flight control group which generally includes elevators, rudder, ailerons, trim tabs, wing flaps, speed brakes and slats.

If you change the governor, tho, Para 4a(1)(e) says a test flight is needed.



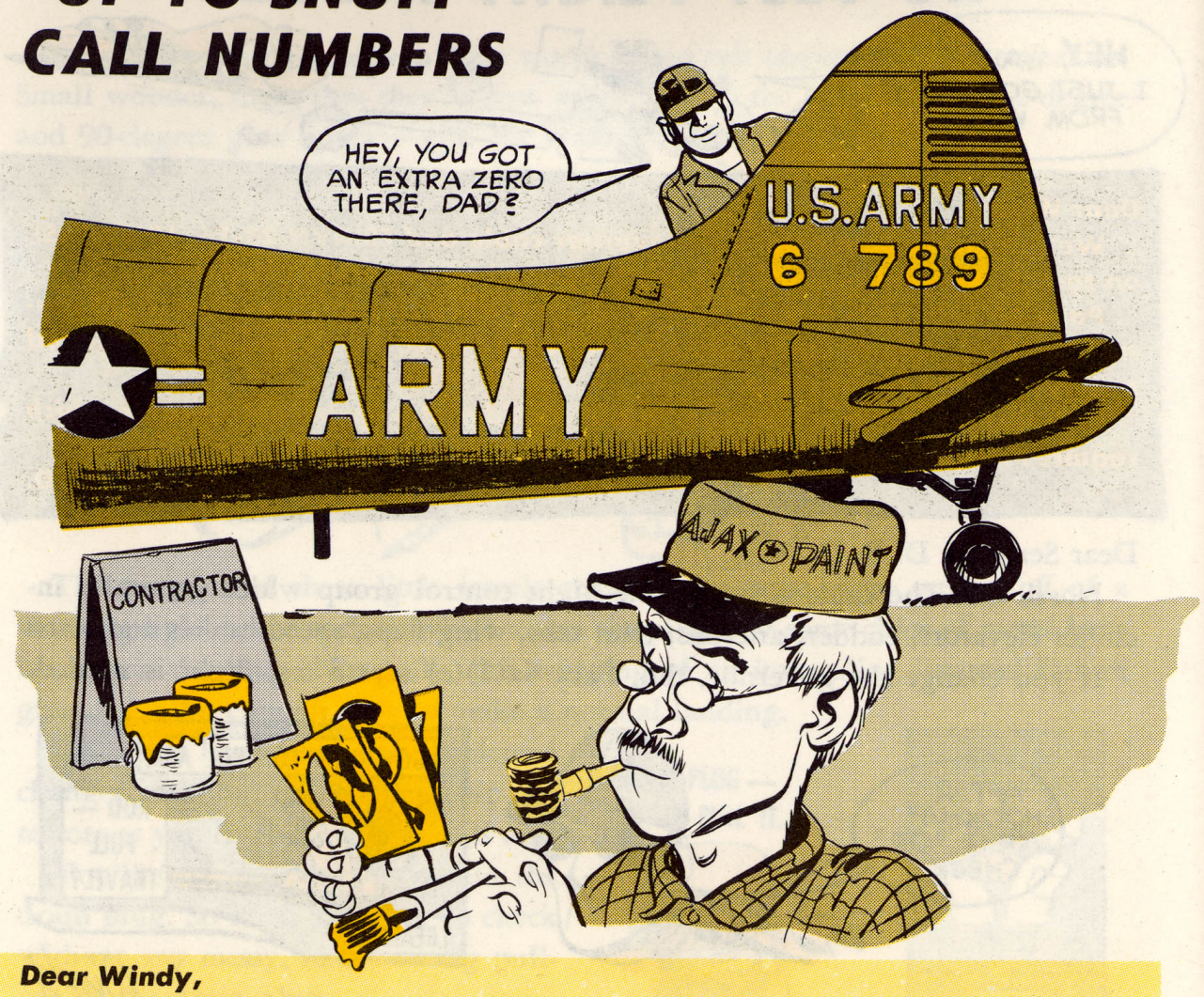
Windy

THE COLOR'LL CLUE YOU

Some multi-fuel engines will run on almost anything—but not a recip aircraft engine. Some birds have been juiced up with clear color JP-4 instead of the AvGas called for in TB AVN-2 (27 Oct 65). To head off a de-fueling chore keep an eye on the color of the petrol going in your flying machine. The color will also clue you in on the grade.

COLOR	GRADE
Red	80/87
Blue	91/96
Green	100/130
Purple	115/145
Straw	JP-4

UP-TO-SNUFF CALL NUMBERS



Dear Windy,

The serial number of our Beaver (U-6) is 56-XXX. This number is also the radio call number painted on the tail of our bird.

Somewhere along the line, tho, it seems that we lost a zero or two out of the tail number and this can lead to paperwork errors. I say the radio call number should not be exactly the same as the aircraft serial number.

Am I right?

SP6 F. J. P.

Dear Specialist F. J. P.,

Due to a fairly new policy, you're right as rain. But don't sweat it.

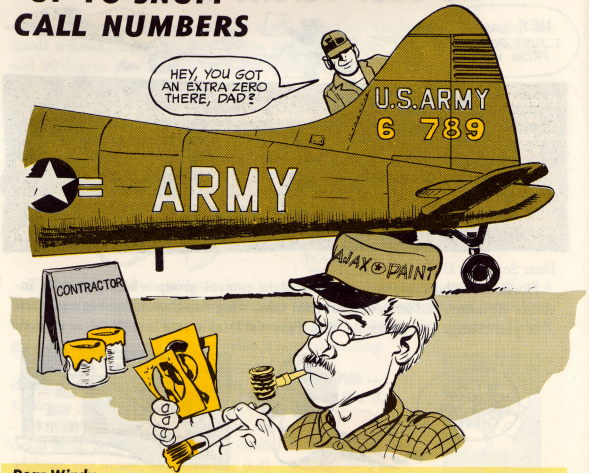
The next time your bird is scheduled for a complete repaint job, the first numeral of the contract year and the hyphen will be dropped because they should not be part of the call number.

Para 76 of TB AVN 7, Change 5 (8 Feb 66) on painting and marking of aircraft says you need a minimum of five numbers. A zero will be added to give your bird the correct call number of 60XXX.

A notation on the DA Form 2407 work request might be a helpful reminder to your support when you put your bird in for repainting.

Windy

UP-TO-SNUFF CALL NUMBERS



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Windy

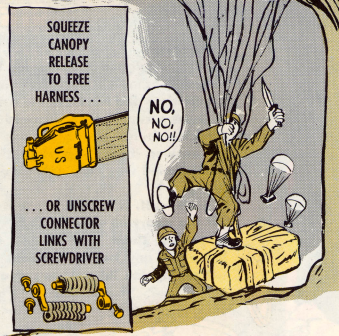
LEAVE THE KNIFE HOME OR . . .

HOW TO UNSNAG A TROOP CHUTE

Any member of a chute recovery team who carries a knife is "trouble." The urge to cut up may overwhelm him without warning and . . . no chute can stand up to a knife.

Just a maneuver ago it was that some misguided knife-wielder recovered a T-10 main chute from a tree by slicing through all 15 canopy suspension lines on two of the risers. Replacing the risers themselves would have cost less. But with half of all the lines cut, the cost went beyond the Army's rebuild criteria and this chute became salvage material.

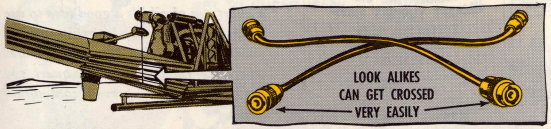
The proper way would have been to squeeze both canopy releases to free the harness . . . or unscrew the two-piece connector links with a screwdriver. Each link breaks down into two L-shaped connectors screwed together. With the screws out, each suspension line can be removed separately.



Souvenir hunting is just as bad as cutting lines. Some of these bigger cargo type chutes run in the $77 to $1,200 range.

Please! No knives! OK?

A DOUBLECROSS WON'T WORK



Appears 1963 model Ravens (OH-23G) are easy prey for a rather simple ailment — crossed antenna leads.

Both the FM (ARC-44) and UHF (ARC-45) radio sets have their antenna leads routed through the same crossmember hole inside the tail boom and there's no way to tell which is which eyeball-style.

But you can sure notice operator style. If neither set will operate, this is a pretty strong hint you've got a doublecross on your hands. If so, see your support avionics type.

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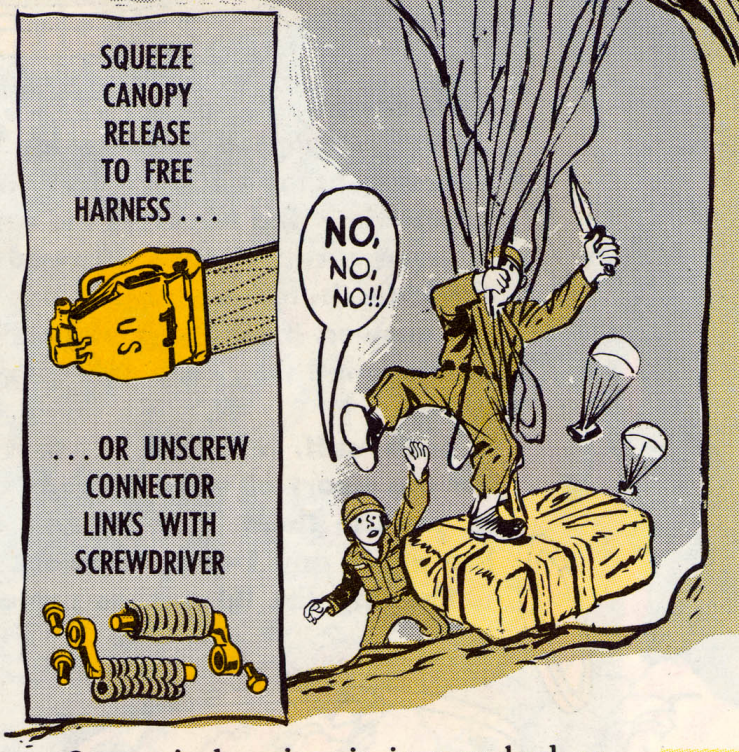
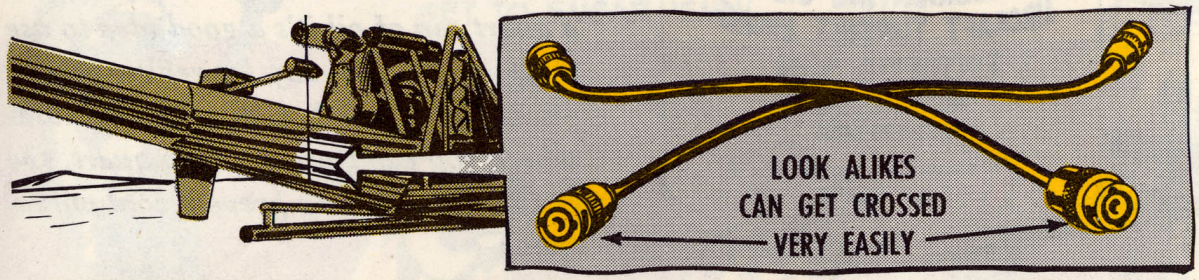
The proper way would have been to squeeze both canopy releases to free the harness . . . or unscrew the two-piece connector links with a screwdriver. Each link breaks down into two L-shaped connectors screwed together. With the screws out, each suspension line can be removed separately.



Souvenir hunting is just as bad as cutting lines. Some of these bigger cargo type chutes run in the $77 to $1,200 range.

Please! No knives! OK?

A DOUBLECROSS WON'T WORK



Appears 1963 model Ravens (OH-23G) are easy prey for a rather simple ailment — crossed antenna leads.

Both the FM (ARC-44) and UHF (ARC-45) radio sets have their antenna leads routed through the same crossmember hole inside the tail boom and there's no way to tell which is which eyeball-style.

But you can sure notice operator style. If neither set will operate, this is a pretty strong hint you've got a doublecross on your hands. If so, see your support avionics type.

SAVE THE LIDS!

Dear Editor,

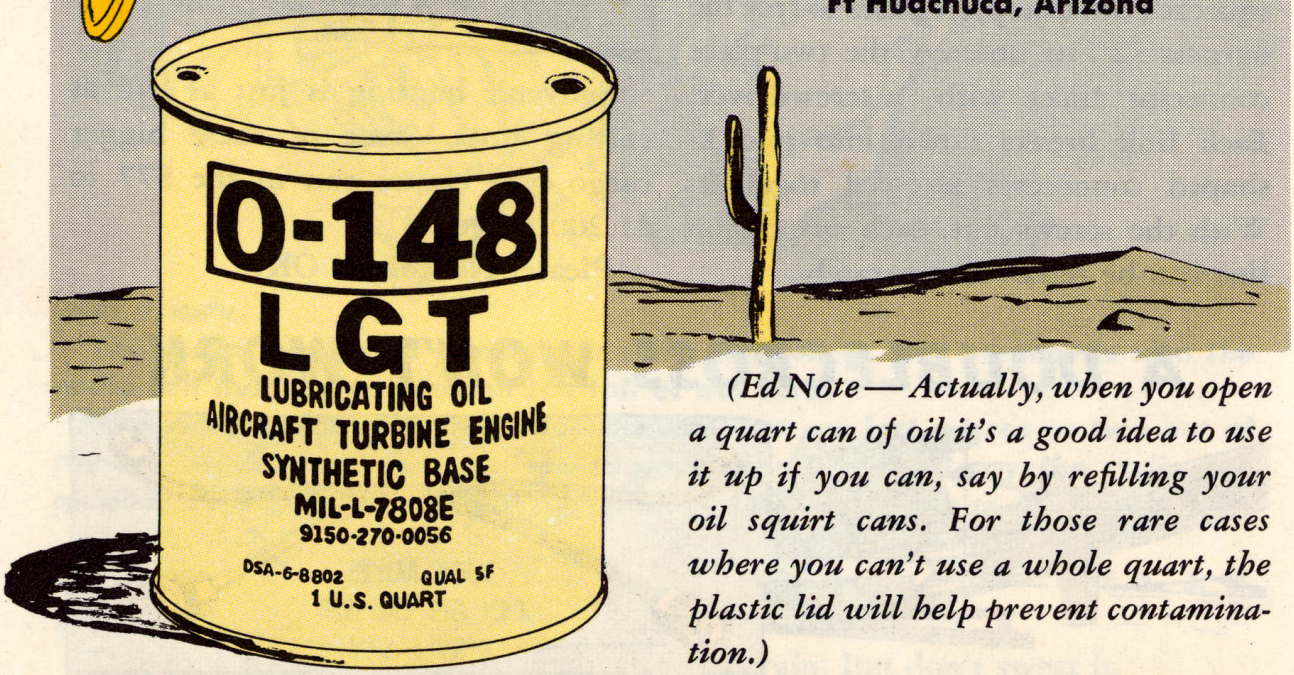
We got gigged recently for leaving an open quart can of aircraft engine oil uncovered. It figured. The dust blows here all the time and the oil in the can was definitely contaminated.

Over a cup of java, brewed in the back room, we got to thinking that those plastic lids on 1-lb coffee cans might be the answer. If they kept the coffee clean and dry after the can was opened why wouldn't they do the same for an open can of oil?

Sure 'nuff, it turned out that the plastic lid is a perfect fit for the quart oil can. It keeps out all dirt and moisture. Fact is, we use them for hydraulic fluid, transmission oil and on just about any 1-qt can made.

Keeping the lid on has put an end to open can gigs here.

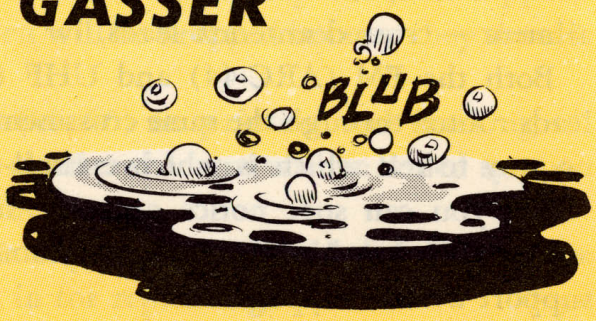
Enrique B. Hoffman
Ft Huachuca, Arizona



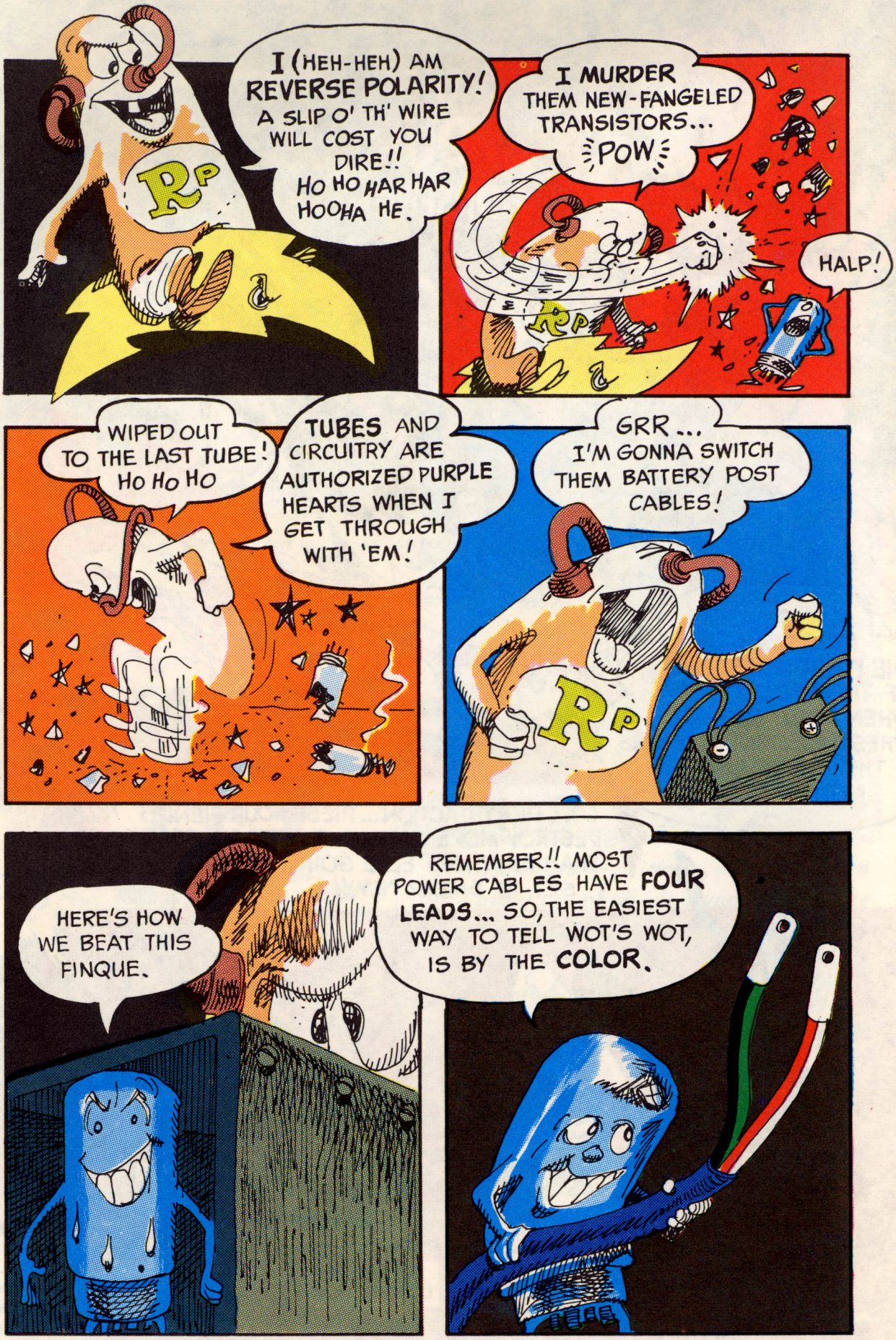
(Ed Note — Actually, when you open a quart can of oil it's a good idea to use it up if you can, say by refilling your oil squirt cans. For those rare cases where you can't use a whole quart, the plastic lid will help prevent contamination.)

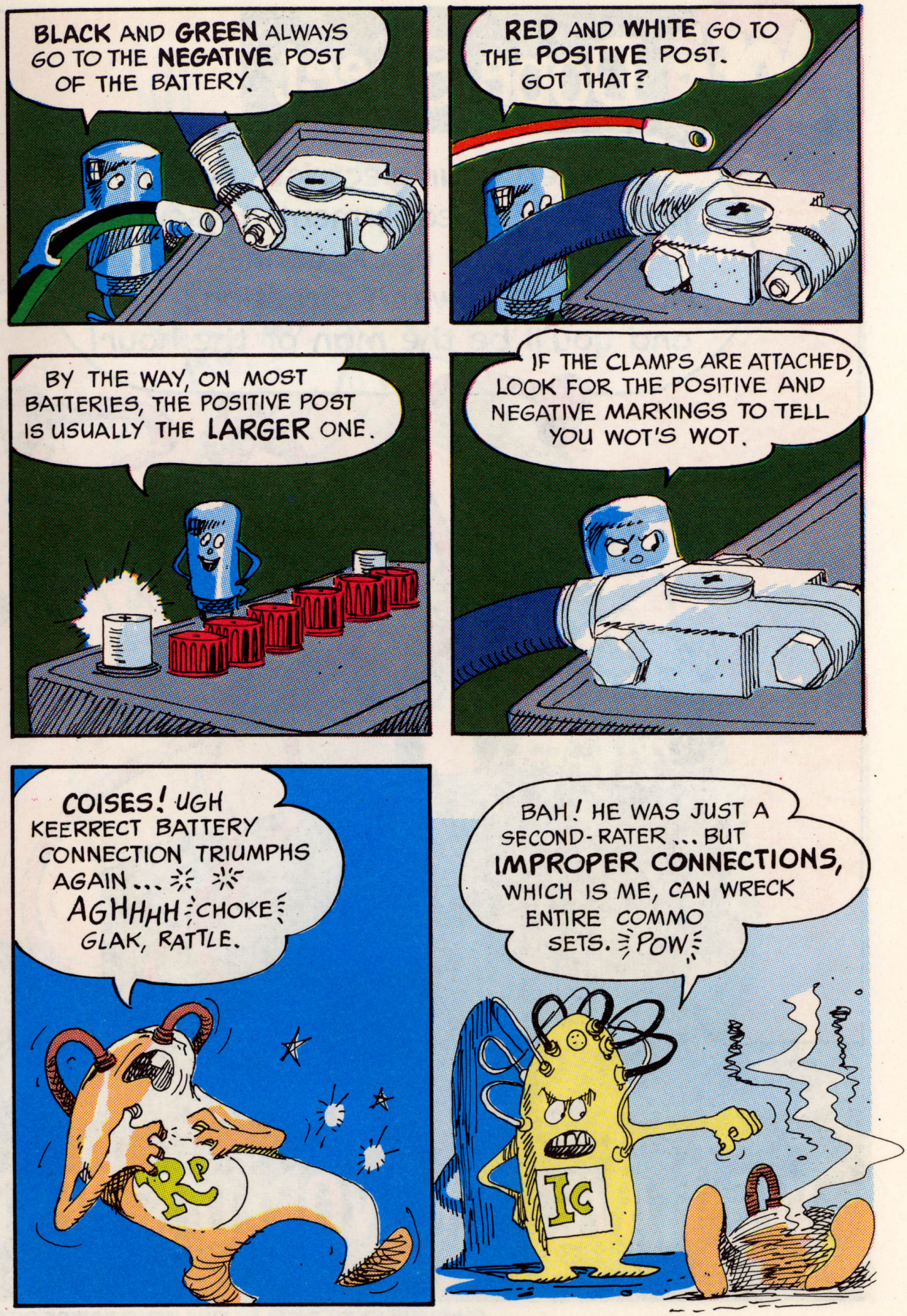
A REAL GASSER

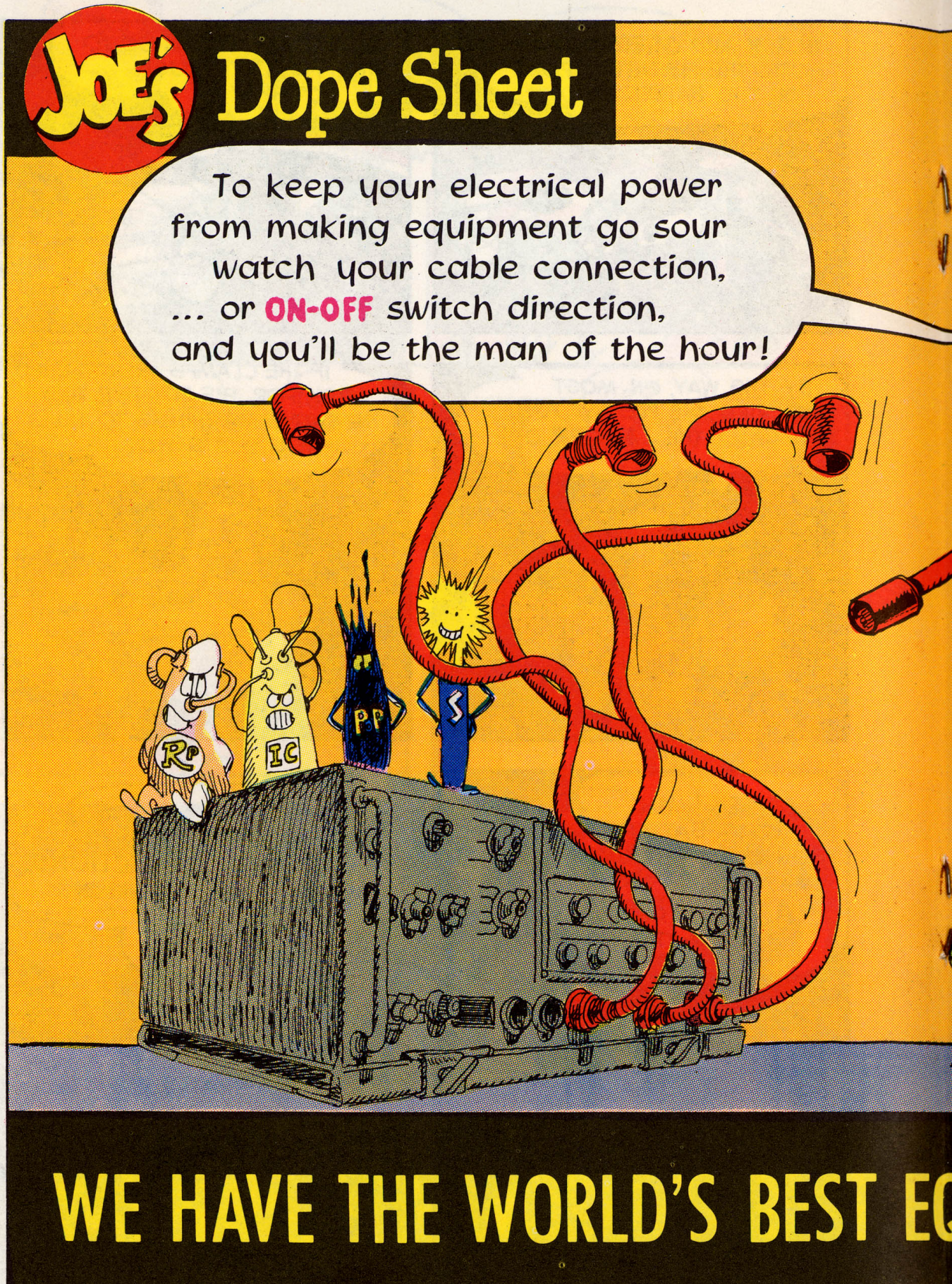
Having trouble finding FSNs for CO_2 cartridges on those older-model life jackets? The B-7 takes FSN 4220-837-3322, and the underarm variety uses the 28-gram, FSN 4220-372-0585. They're listed in SC 4220-IL (Dec 65).



JOE'S DOPE
THE FOUR HORSEMEN
HEY SWINGER! EVER HEAR OF THE FOUR HORSEMEN OF THE APOCALYPSE!! WHEN COMPARED TO THESE ELECTRONIC JOKERS, THEY WERE LIKE... NOTHINGSVILLE!
OK! DIG TH'ACTION... THESE FOUR FIENDS DESTROY MORE COMMO-ELECTRICAL GEAR THAN ANYTHING ELSE GOIN'... SO, GET SET TO SMEAR 'EM!!
RP
REVERSE POLARITY
IC
IMPROPER CONNECTIONS
P·P
REMOVING COMPONENTS WITH POWER ON
$
STARTING VEHICLE WITH COMMO EQUIPMENT ON


I (HEH-HEH) AM REVERSE POLARITY! A SLIP O' TH' WIRE WILL COST YOU DIRE!! HO HO HAR HAR HOOHA HE.
I MURDER THEM NEW-FANGELED TRANSISTORS...
POW
HALP!
WIPED OUT TO THE LAST TUBE! HO HO HO
TUBES AND CIRCUITRY ARE AUTHORIZED PURPLE HEARTS WHEN I GET THROUGH WITH 'EM!
GRR... I'M GONNA SWITCH THEM BATTERY POST CABLES!
HERE'S HOW WE BEAT THIS FINQUE.
REMEMBER!! MOST POWER CABLES HAVE FOUR LEADS... SO, THE EASIEST WAY TO TELL WOT'S WOT, IS BY THE COLOR.


BLACK AND GREEN ALWAYS GO TO THE NEGATIVE POST OF THE BATTERY.
RED AND WHITE GO TO THE POSITIVE POST. GOT THAT?
BY THE WAY, ON MOST BATTERIES, THE POSITIVE POST IS USUALLY THE LARGER ONE.
IF THE CLAMPS ARE ATTACHED, LOOK FOR THE POSITIVE AND NEGATIVE MARKINGS TO TELL YOU WOT'S WOT.
COISES! UGH KEERRECT BATTERY CONNECTION TRIUMPHS AGAIN... AGHHHH CHOKE GLAK, RATTLE.
BAH! HE WAS JUST A SECOND-RATER... BUT IMPROPER CONNECTIONS, WHICH IS ME, CAN WRECK ENTIRE COMMO SETS. POW
IC

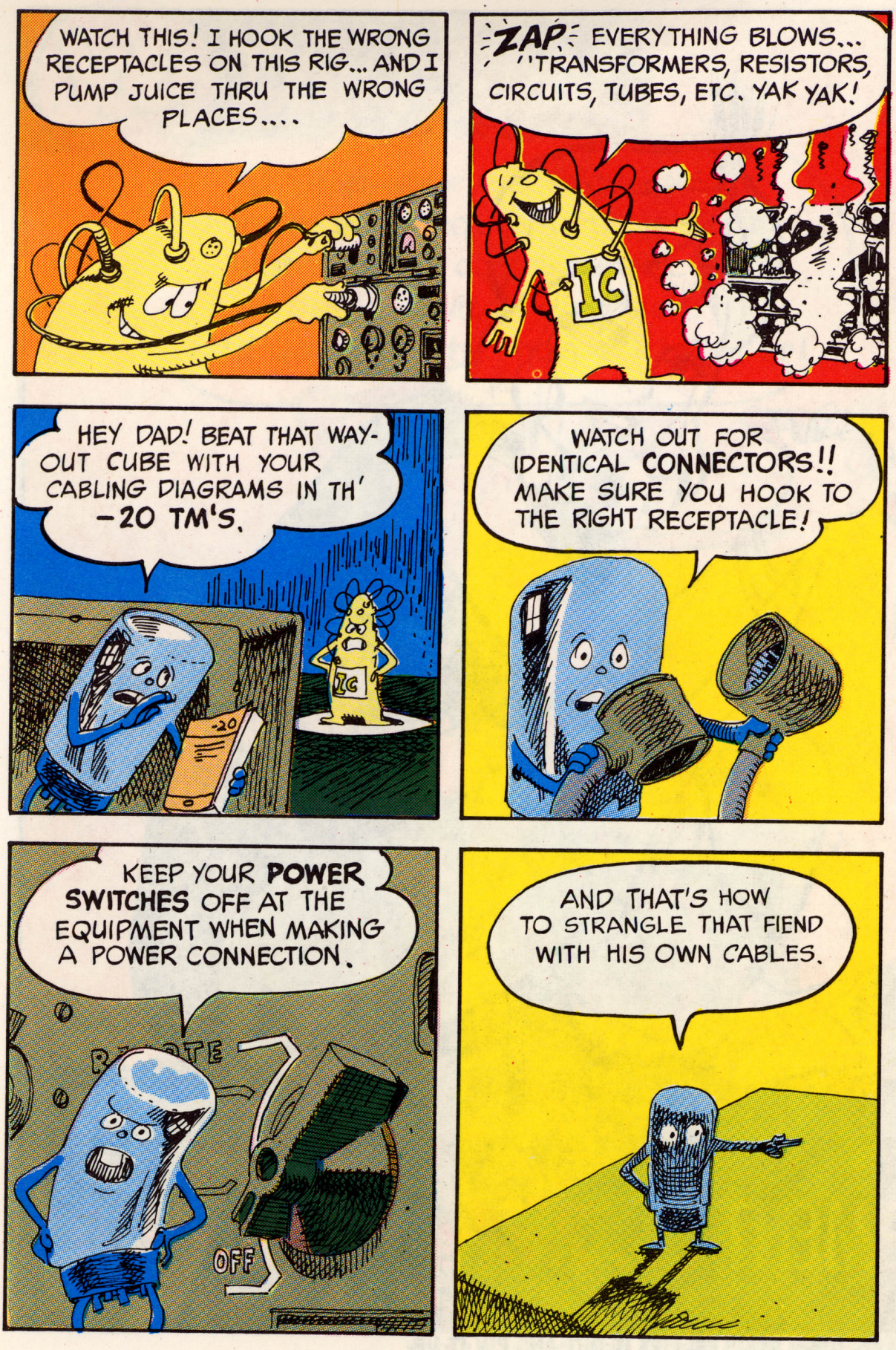


IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BUL

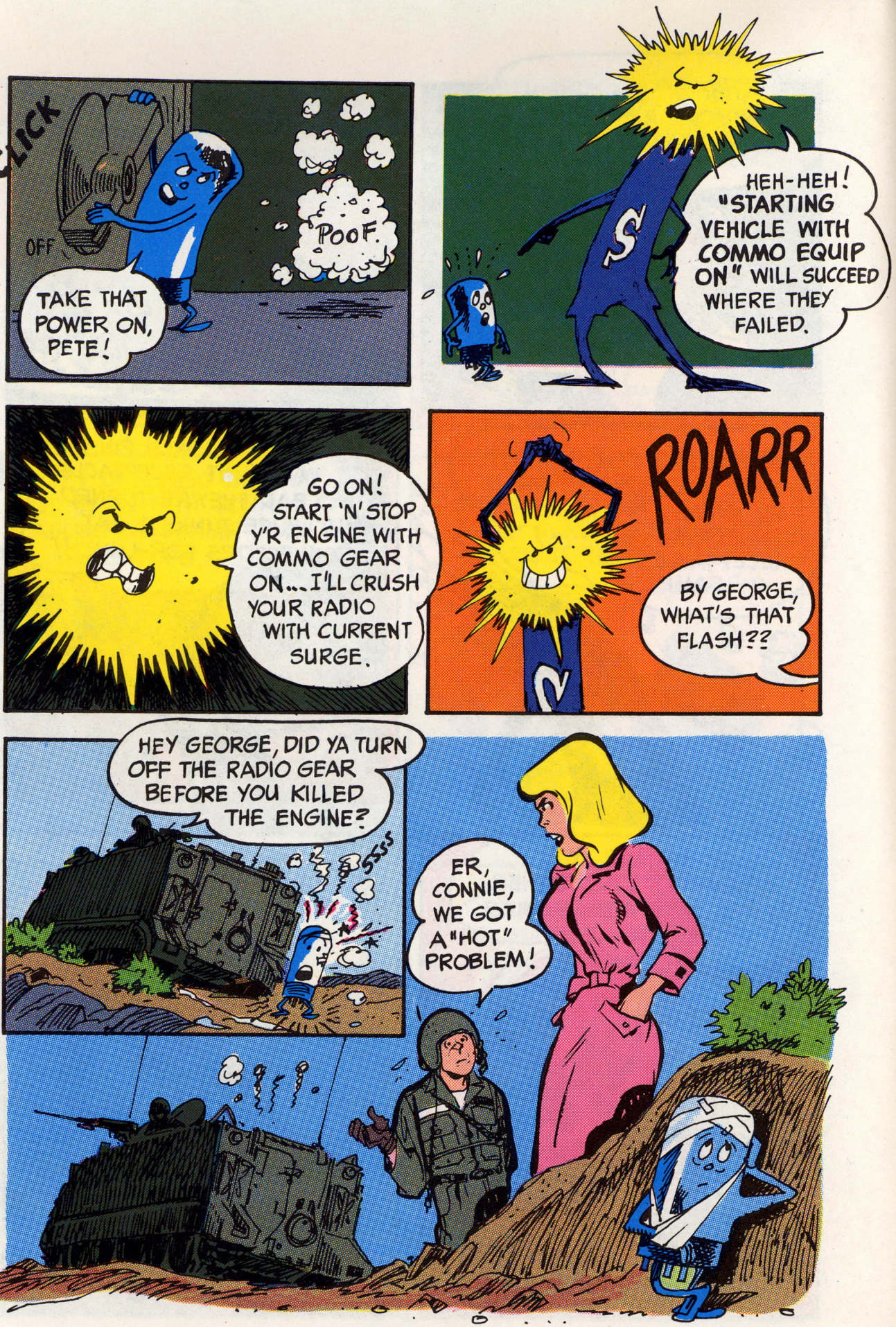
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

QUIPMENT ... *Take care of it*

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


WATCH THIS! I HOOK THE WRONG RECEPTACLES ON THIS RIG... AND I PUMP JUICE THRU THE WRONG PLACES....
ZAP! EVERYTHING BLOWS... TRANSFORMERS, RESISTORS, CIRCUITS, TUBES, ETC. YAK YAK!
IC
HEY DAD! BEAT THAT WAY-OUT CUBE WITH YOUR CABLING DIAGRAMS IN TH' -20 TM'S.
-20
IC
WATCH OUT FOR IDENTICAL CONNECTORS!! MAKE SURE YOU HOOK TO THE RIGHT RECEPTACLE!
KEEP YOUR POWER SWITCHES OFF AT THE EQUIPMENT WHEN MAKING A POWER CONNECTION.
OFF
AND THAT'S HOW TO STRANGLE THAT FIEND WITH HIS OWN CABLES.

YAHHHGH! I'M CHOKING... SOMEBODY HAS PROPERLY CONNECTED TH' CABLES AGHH WHEEZE.
IC
FOOEY! NEVER FIGURED HE WAS ANY GOOD, ANYHOW. TOO MANY CABLES. BUT ME...THAT'S DIFFERENT.
POP
REMOVING COMPONENTS WITH THE POWER ON IS MY NAME. SPIKING CONNECTORS AND RECEPTACLES IS MY GAME.
POP
I SCORCH PINS IN MOUNT RECEPTACLES SO BAD THEY'RE TURNED INTO PURE JUNK! I EAT CONNECTORS FOR LUNCH!
POP
SPIKES ARE MY SPECIALTY! I GET OTHER PARTS WITH THEM BABIES. DIG THIS, KAT.
HUH GET AWAY FROM THAT POWER SWITCH! NO NO NO NO
POP


CLICK
OFF
POOF
TAKE THAT POWER ON, PETE!
HEH-HEH! "STARTING VEHICLE WITH COMMO EQUIP ON" WILL SUCCEED WHERE THEY FAILED.
GO ON! START 'N' STOP Y'R ENGINE WITH COMMO GEAR ON... I'LL CRUSH YOUR RADIO WITH CURRENT SURGE.
ROARR
BY GEORGE, WHAT'S THAT FLASH??
HEY GEORGE, DID YA TURN OFF THE RADIO GEAR BEFORE YOU KILLED THE ENGINE?
ER, CONNIE, WE GOT A "HOT" PROBLEM!

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 5-3805-232-12, Feb, Loader, Scoop Type: Dsl Drvn, Multi-purpose Bucket, SAE Struck Bucket Cap 1½ Cu Yd and SAE Rated Cap 1⅜ Cu Yd.
TM 5-4110-205-15, Feb, Refrig Unit, Mech, Panel Type, Gas Drvn, 9,000 BTU, Type 1, For Semitrailer Refrigerator, 7½ Ton.
TM 5-6115-301-20P, Feb, Gen Set, Dsl Eng, 45KW (Hollingsworth JHDX45A) FSN 6115-678-1737.
TM 9-1005-209-25P, Jan, Mount, Machine Gun, Cal .50, M55.
TM 9-1005-249-14, C5, Jan, Rifles; M16, M16E1.
TM 9-1055-217-12P, Mar, 2.75 Inch Rocket Launcher XM3.
TM 9-1400-250-15/1, Feb, Nike-Herc, Nike-Herc Imp.
TM 9-1410-375-12P/1, Mar, Pershing.
TM 9-1430-250-15P/4/2, Mar, Nike-Herc.
TM 9-1430-501-12/3, Feb, Hawk.
TM 9-1430-502-15P/1, Feb, Hawk.
TM 9-1430-510-15P/1, Jan, Hawk.
TM 9-1440-500-15P/1, Feb, Hawk.
TM 9-1450-376-15P/1, Mar, Pershing.
TM 9-2320-206-10, Mar, Trucks: Tractor M123; Cargo M125.
TM 9-2320-211-10, C4, Feb, Trucks: Chassis, M39, M40, M61, M63, M139C, M139D, Cargo, M54, M55, Dump, M51, Tractor, M52, M246, Wrecker, Medium, M62, M543.
TM 9-2320-211-20, C2, Feb, Trucks: Chassis, M39, M40, M40C, M61, M61A2, M63C, M63A2, M139, M139C, M139D, M139F, Cargo, M41, M54, M54A1, M54A2, M55, M55A2, Dump, M51, M51A2, Tractor, M52, M52A1, M52A2, Tractor, Wrecker, M246, Wrecker, Medium, M62, M543, M543A2.
TM 9-4935-253-15P/2/2, Feb, Nike-Herc, Nike-Herc Imp.
TM 9-4935-306-24, Jan, Sergeant.
TM 10-1670-227-20P, Feb, Pilot Chute, Assy, Cargo Type, 3 Ft Sq, Cotton or Nylon Canopy.
TM 10-4230-203-15, Jan, Delousing Outfit, Pwr Drvn, Gas Eng, 4 Cyc, Air Cooled, 10 Dusting Guns (Curtis Automotive Devices Mdl CDR 70,000).
TM 11-5805-361-15, Dec, AN/UCC-1(V) and AN/FCC-34, telephone terminals.
TM 11-5820-590-12, Mar, Radio Set AN/PRC-74.
TM 11-5840-208-20, C5, Mar, Radar Set AN/MPQ-4A.
TM 55-1100-300-12-4, Feb, OP/ORG Maint, Sergeant.
TM 55-1510-202-20P, Feb, O-1A.
TM 55-1510-203-20P, C6, Mar, U-6.
TM 55-1510-205-20P, C2, Mar, U-1.
TM 55-1520-203-10, C2, Mar, CH-37.
TM 55-1520-203-20, C2, Mar, CH-37.
TM 55-1520-204-20P, Feb, OH-13.
TM 55-1520-209-10, Feb, CH-47A.
TM 55-1520-209-10, C1 thru C7, Mar, CH-47.
TM 55-1520-209-10, C8, Apr. CH-47.
TM 55-1520-209-10CL, Mar, CH-47.
TM 55-1520-210-10, C-1, Mar, UH-1.
TM 55-1520-210-20P, C1, Mar, UH-1.
TM 55-1520-210-20P, C2, Mar, UH-1.
TM 55-1520-210-20PMD, Mar, UH-1.
TM 55-1520-210-20PMI, Mar, UH-1.
TM 55-1520-210-20PMP, Mar, UH-1.
TM 55-1520-211-10, C1, Mar, UH-1.
TM 55-1520-211-20PMD, Mar, UH-1.
TM 55-1520-211-20PMI, Mar, UH-1.
TM 55-1520-211-20PMP, Mar, UH-1.

MODIFICATION WORK ORDERS (ALL NORMAL)

MWO 9-2300-216-30/6, Mar, Organizational, Guns, S-P, M107, Howitzer, M110.
MWO 10-1670-206-30/2, Feb, Parachute Personnel; Ejection Seat (MK-J5) Cable, Static Line, Slide Pin Disconnect: Replace.
MWO 55-1500-200-20/3, Apr, UH-1.
MWO 55-1500-200-30/25, Apr, UH-1.
MWO 55-1510-203-34/4, C1, Apr, U-6.
MWO 55-1510-204-30/4, Apr, OV-1.
MWO 55-1520-204-34/25, C2, Mar, OH-13.
MWO 55-1520-204-34/30, C2, Apr, OH-13.
MWO 55-1520-209-20/51, Mar, CH-47.
MWO 55-1520-209-30/17, C1, Apr, CH-47.
MWO 55-1520-209-30/24, Mar, CH-47.
MWO 55-1520-209-30/29, Mar, CH-47.
MWO 55-1520-209-34/3, Mar, CH-47.
MWO 55-1520-209-34/43, C1, Apr, CH-47.

TECHNICAL BULLETINS

TB 5-330-1, Jan, Fortifications For Parked Army Aircraft.
TB 9-1300-251, Mar, Fuze, Mechanical Time And Superquick: M564; Description, Handling And Use.
TB 9-1400-500-25, Feb, Hawk.
TB 10-1670-200-20/2, Apr, Inspection of Cord, Nylon, Type II, Used For Suspension Lines of Parachute, Personnel, Troop Back.
TB 55-1510-204-20/18, Mar, OV-1.
TB 55-1520-209-30/4, Mar, CH-47.
TB 55-2800-200-20/1, Apr, OV-1, UH-1.

MISCELLANEOUS

Approach, Apr.
DA Cir 310-10, Apr, Military Publications.
LO 5-3805-200-15-1, Feb, Loader, Scoop Type, DED, 2½ Cu Yd, Air Transportable (Clark Mdl 175A-M and 175A-M23) W/Eng Cummings Mdl JT.
LO 5-4310-256-15, Feb, Compressor, Recip: Air, Hand Truck Mtd, Gas Eng: 8CFM; 175 PSI (Champion Pneum Mdl LP-832 Eng-2) and Compressor, Recip: Air; 5CFM 175 PSI (Champion Pneum Mdl LP-512-Eng-2).
LO 9-2320-206-12, Mar, Trucks: Tractor M123, Cargo M125.
LO 9-2320-213-12, Feb, Carrier, Light Wpns, M274, M274A1.
SC 6230-93-CL-E01, Feb, Light Set, General Illumination: 25 Outlet.
SC 6665-94-CL-E13, Feb, Detector Kit, Chemical Agent, VGH, AN-M15A2A.
SC 6665-94-CL-E14, Feb, Detector Kit, Chemical Agent ABC-M18A2.
TB AVN 23-60, Feb, Flight Simulators.

DA CIR 725-5 EXTENDED

You can forget the expiration date on DA Cir 725-5 (30 Jun 64) and its Ch 1 (5 Oct 64). They're still your guide for deleting components from tool sets and major assemblies. Major commands have been advised by TWX 11 1409, AMSSM-ST-A (Nov 65) that the provisions of the circular remain in effect.

EITHER WAY

Dear Half-Mast,

We got gigged the other day because of the way the downlock limit switch cover was installed on our Nike-Hercules launcher. The inspector said it was on backwards... that the end furtherest from the mounting holes should be over the cam-end of the switch. Why?

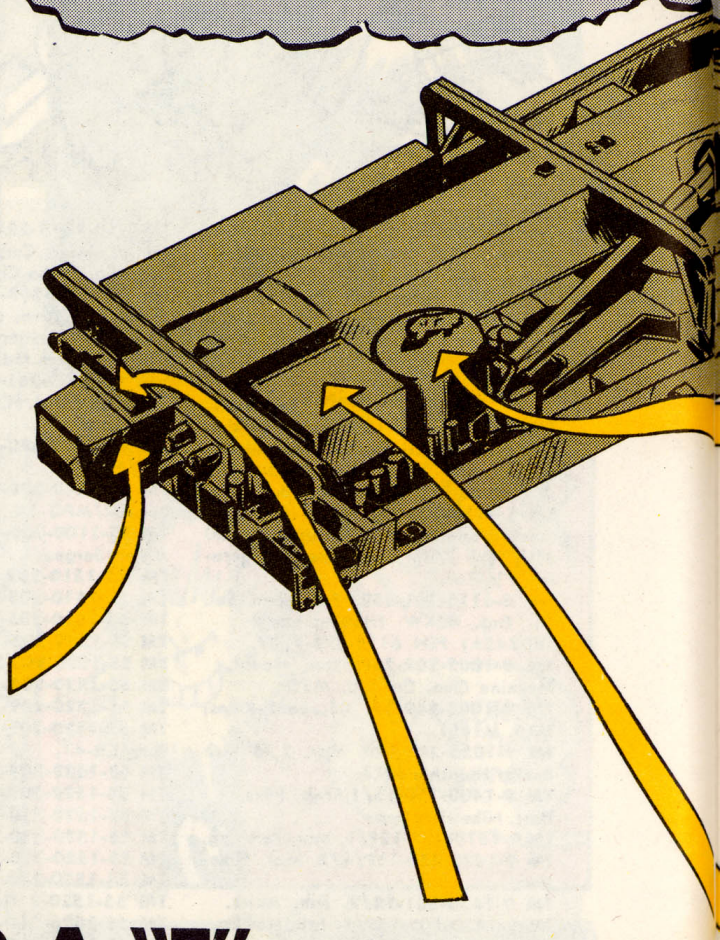
MSgt W. G.

Dear Sergeant W. G.,

By putting the cover in the position called for by the inspector, the one end of the cover protects the actuating shaft of the switch.

So take a long blink when you go by Fig 18 in TM 9-1440-250-20/1 (Mar 65). The picture,which shows the cover in the position that got you the gig, is being changed.

Half-Mast



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Trouble is . . . that locking wedge adjuster's not the easiest thing to handle with a plain bolt. So we got one six inches long . . . had the head cut off . . . and then had our support people weld a piece of ¼-in rod on the bolt. This gave us a T-handle that really does the job.

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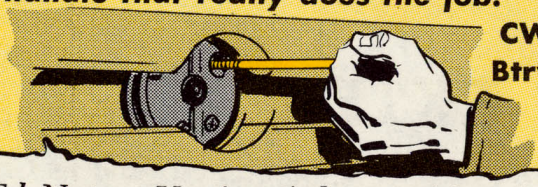
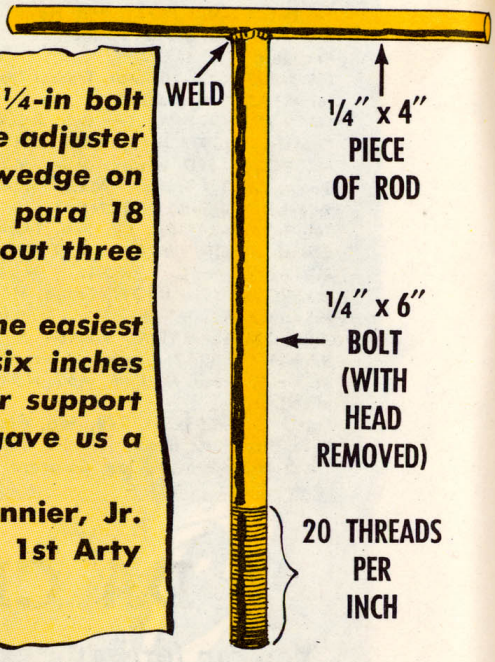
Btry D, 4th Msl Bn, 1st Arty





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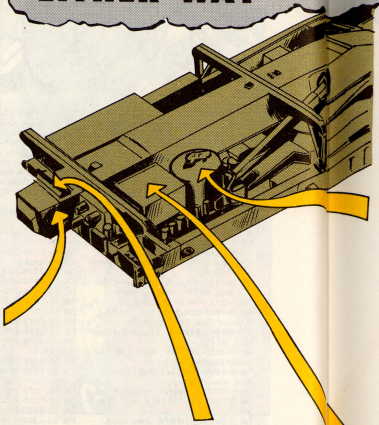

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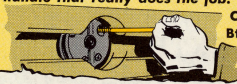

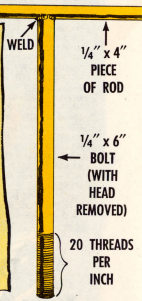

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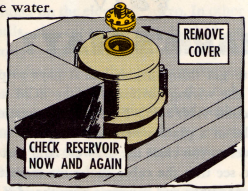
THEY DON'T MIX

It's right there in para a, on page 5 of your LO 9-1400-250-20 (Jan 65).

Every quarterly, open the drain on the bottom of the hydraulic oil reservoir on your launcher and let some of the fluid run out.

The idea is to give any water in the bottom of the reservoir a place to go. Draining a cupful of oil should just about get rid of any unwanted stuff that might be in the reservoir. That includes dirt, sand and whatever—as well as the water.

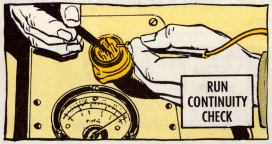


And seeing's how steel (the kind the reservoir's made of) and water add up to rust, it pays to take a gander inside the reservoir now and again. A good time to do this is when you give the reservoir a complete change of oil. When it's empty, take off the cover and look at the inside walls. If you spot rust, sing out for your support unit.

It sure wouldn't hurt to empty the reservoir and check for rust if you get more water than oil when you do the draining like it says in para a. All that water could be a clue to rust troubles.

Make sure you don't put anything but pure oil in the reservoir. And be sure the cans have not been opened until you get ready to tilt them.

LONG ON SHORTS?



Has your support unit been around to apply MWO 9-1440-252-30/32 (Sep 64) to the distribution boxes on your launcher?

That's the MWO that adds things like wiring harnesses, cables and a connector plug to your distribution box so's you can run 60-cycle commercial power to your missile and booster heaters.

The MWO's a good deal, but some of the connector plugs that slipped into the supply system are anything but. Before you use the plugs, get out your ohmmeter and run a continuity check to see if you have a short between the case and any of the pins. (The MWO doesn't tell your support people to make the check.) If there is a short, yell for the guys at DS. Turning on the power with a bad connector plug in place could short out your launching and section equipment.

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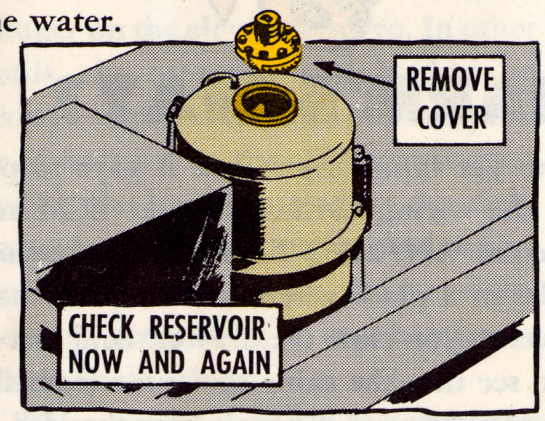
Every quarterly, open the drain on the bottom of the hydraulic oil reservoir on your launcher and let some of the fluid run out.

The idea is to give any water in the bottom of the reservoir a place to go. Draining a cupful of oil should just about get rid of any unwanted stuff that might be in the reservoir. That includes dirt, sand and whatever—as well as the water.

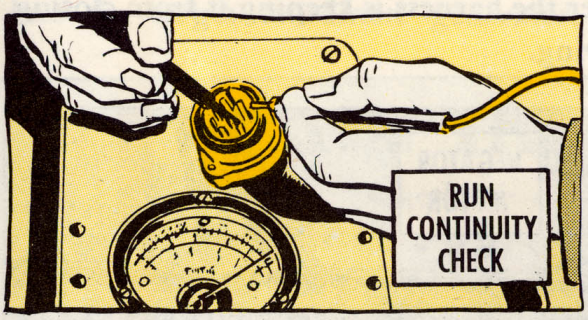


And seeing's how steel (the kind the reservoir's made of) and water add up to rust, it pays to take a gander inside the reservoir now and again. A good time to do this is when you give the reservoir a complete change of oil. When it's empty, take off the cover and look at the inside walls. If you spot rust, sing out for your support unit.

It sure wouldn't hurt to empty the reservoir and check for rust if you get more water than oil when you do the draining like it says in para a. All that water could be a clue to rust troubles.

Make sure you don't put anything but pure oil in the reservoir. And be sure the cans have not been opened until you get ready to tilt them.

LONG ON SHORTS?



Has your support unit been around to apply MWO 9-1440-252-30/32 (Sep 64) to the distribution boxes on your launcher?

That's the MWO that adds things like wiring harnesses, cables and a connector plug to your distribution box so's you can run 60-cycle commercial power to your missile and booster heaters.

The MWO's a good deal, but some of the connector plugs that slipped into the supply system are anything but. Before you use the plugs, get out your ohmmeter and run a continuity check to see if you have a short between the case and any of the pins. (The MWO doesn't tell your support people to make the check.) If there is a short, yell for the guys at DS. Turning on the power with a bad connector plug in place could short out your launching and section equipment.

SIMULATOR STATION SLANTS

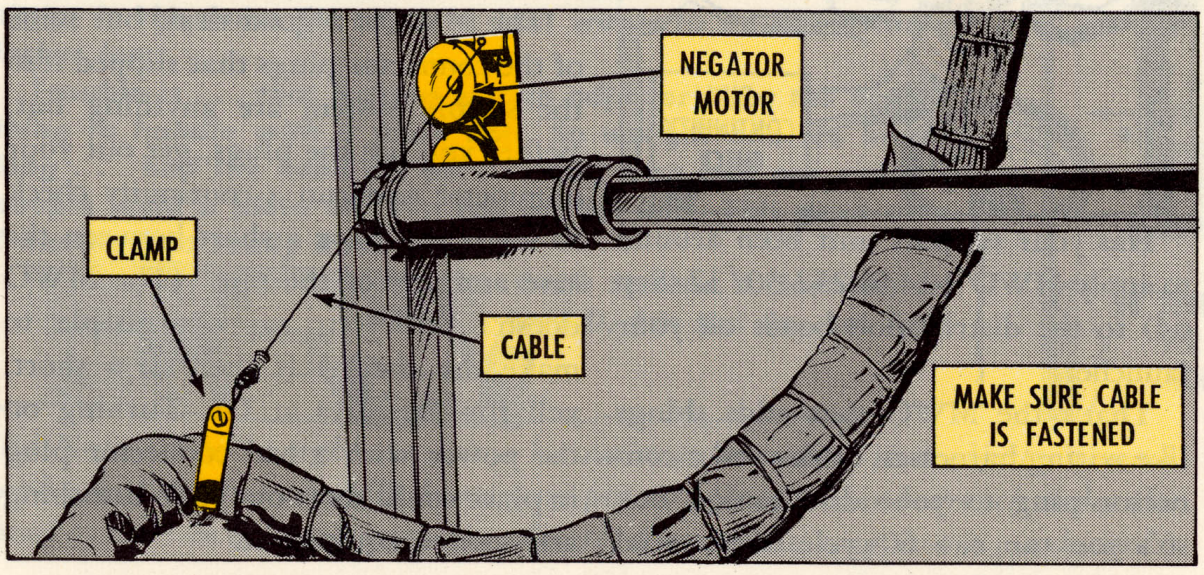
HARNESS IN HARM'S WAY?

True . . . it takes a little stretching to get things right, but it pays to put the clamp where it belongs on each of the wiring harnesses in the ECM and chaff cabinet drawers in your Nike-Hercules AN/MPQ-T1 simulator station.

In other words . . . the clamp should be in a place where it'll keep the harness from looping down behind the drawer as you close the drawer. And just as important is checking now and again to see that the cable that runs from the negator motor to the clamp hasn't let go at either end. Seeing's how the idea of the motor is to pull the harness out of the way when you close the drawer, a busted or disconnected cable will let the harness drop behind the drawer as you go to close it. Which is the same as having the clamp in the wrong place.

So what's all the to-do about the harness? Nothing, except that closing the drawer on the harness could bare some wires. And this could lead to a short circuit, and a short could ruin all the harnesses in the cabinet. That's all.

Another thing . . . if you see that one of the ECM or chaff cabinet drawers is open a bit as you go by it, shy away from slamming it shut — at least until after you've taken a look inside to see whether the harness is keeping it from closing. A quick look could keep sparks from flying.



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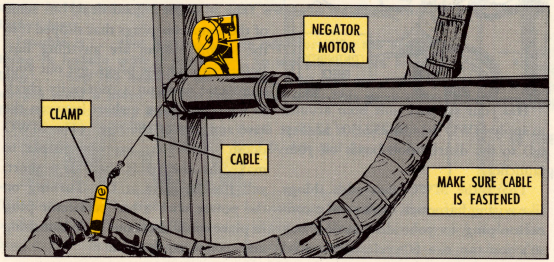


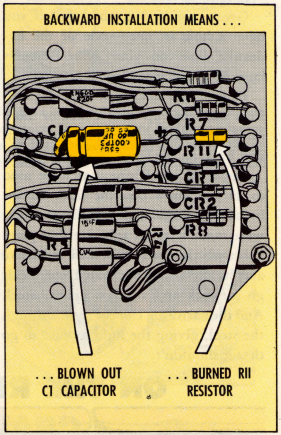
BE POSITIVE

It only takes a couple seconds of not using the thinker and you can be in for trouble with your simulator station.

The problems take shape when the C1 capacitor is put in backwards in the filter network across the Z1 gear changer on the elevation servo. In other words, the capacitor gets hooked up wrong — the positive end of the capacitor is fastened to the negative connection on the board instead of the right way — positive to positive. And with a network in each of the six target coordinate generators, it can happen in a half-dozen places.

When you have one of the capacitors in backwards, you get a big voltage across it. The positive end of the capacitor will blow out . . . and the R11 resistor burns up because of too much current. This leaves you with a gear changer and elevation servo that won't work.

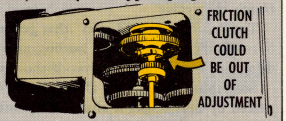
So . . . before you slip a filter network into the target coordinate generator, take a close look at how the C1 capacitor sits on the board. You want + going to +.



IN THE CLUTCH

So you turn the range knob on one of the six target coordinate generators in your AN/MPQ-T1 and you hear the range servo motor turn with the knob. You shouldn't. The only thing you want to notice as you twist the knob is that the dial moves with it.

It's a good bet that the friction clutch for the servo motor drive is out of adjustment when you hear the motor turning over. And putting the clutch back in shape is a job for your support people.



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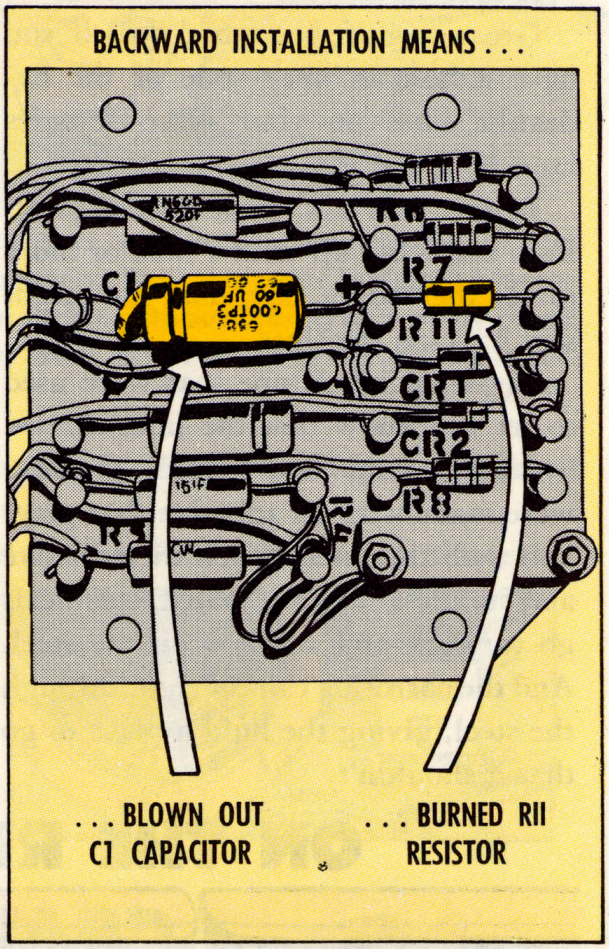

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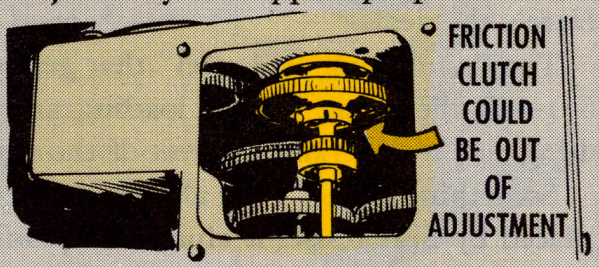


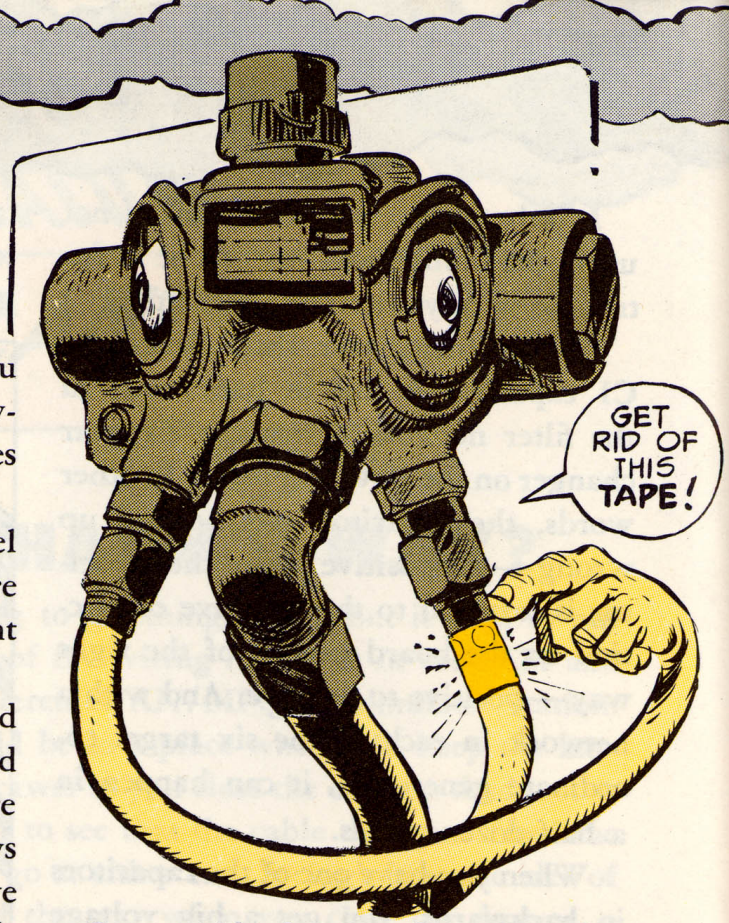
IT'S A PIT(Y)

A hole in one.

Great in golf, but a bad deal if you have a hole in one—one of the hydraulic lines on your Nike-Hercules launcher, that is.

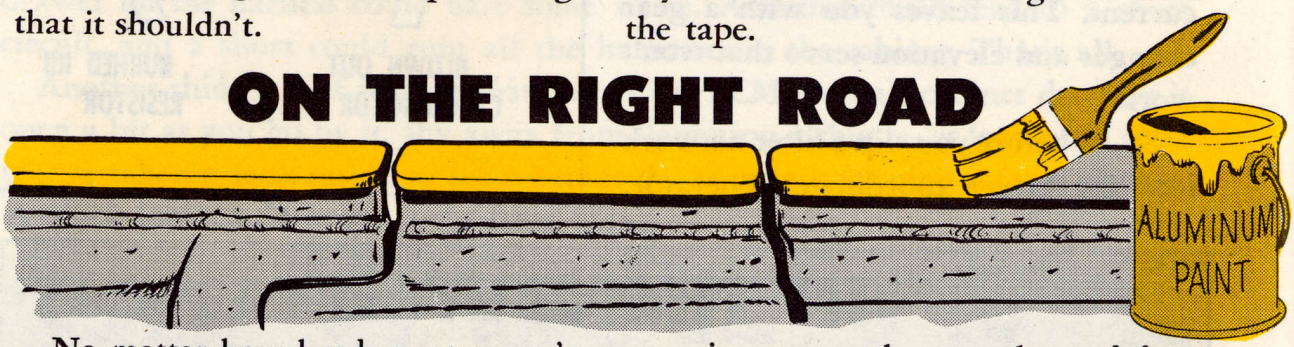
Believe it or not, those stainless steel lines can wind up with a hole or more under the coding tape that you might still have on the lines.

Those strips of tape that were used to let you know that the lines carried hydraulic fluid under high pressure were made with an adhesive that plays hob with the lines. When the adhesive and stainless steel are mated, chemicals go to work and actually pit the steel. And the corrosion can eat right through the steel, giving the fluid a place to go that it shouldn't.



So get rid of any coding tape that may be on the lines. And use a cleaner like dry cleaning solvent to wipe away any adhesive that doesn't go off with the tape.

ON THE RIGHT ROAD



No matter how hard you try you're not going to get three apples and four pears to add up to seven oranges.

And when you read and see on page 5, PS 152, about using aluminum lacquer on your Nike-Hercules launching and handling rail, something doesn't add up. Here's the deal.

The "aluminum clad steel" that gets painted—according to TB 9-337 (Mar 61)—is the tracks on the loading and storage racks. The launching and handling rail tracks (and the rest of the rail) should be hit with OD paint.

Something else . . . the aluminum lacquer called for by the TB has been replaced by heat resistant aluminum paint. One gallon of the paint is listed under FSN 8010-655-8458 on page 36 of TM 9-1440-250-15P/1/1 (Apr 65).

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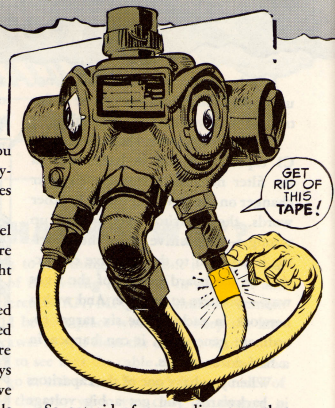

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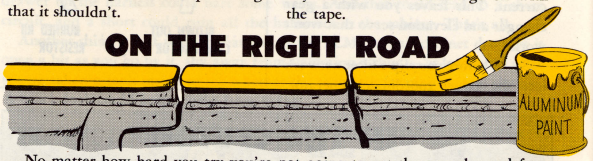

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LEAVE ALONE

Dear Half-Mast,

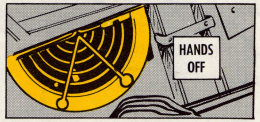
MWO 9-1430-252-30/2/4 (18 Jul 63) puts ventilating equipment in the RC van for the Improved Nike-Hercules system. And this gear includes blower motors. Trouble is . . . there's nothing in writing about lubing or pulling other types of maintenance on the motors, at least not at the organizational level.

Sgt W. G.

Dear Sergeant W. G.,

You're right . . . and you're not about to find anything on taking care of those motors.

They're sealed and are supposed to run at least 3000 hours before they start acting up.



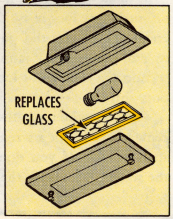
Makes no difference whether the motors are still working after 10,000 hours—or go on the blink after only a few . . . your support people take care of 'em.

Half-Mast

ON GUARD

You can say good-by to those heating troubles you've been having with the ceiling lamps in your Nike-Hercules trailer vans.

The glass lens covering the lamps has been the real pain. By not letting out the heat generated by the lamps, the glass can be blamed for burned out lamps and scorched wiring.



But the glass has now been replaced by a guard—a metal grill. You'll find the three sizes you need on pages 32, 33, 40 and 41 of TM 9-2330-212-24P (Mar 66). They're listed under FSN 2590-053-3630, FSN 2590-053-3631 and FSN 2590-053-3632.

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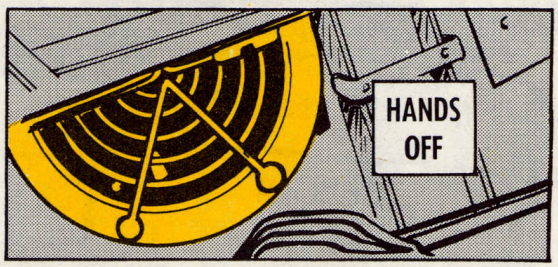

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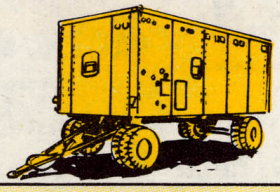

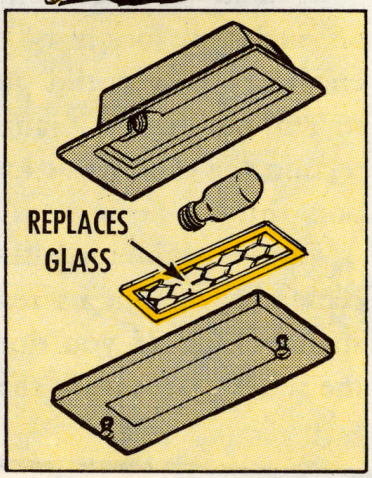

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LOOKING FOR MORTARS?

THE AN/MPQ-4A

A LOOSE NUT CAN THROW YOUR AN/MPQ-4A RADAR SET OFF A MORTAR TARGET JUST ENOUGH TO KEEP YOU FROM WINNING A DEADLY GAME.

HD-264/MPQ-4A

OA-1257 MPQ-4A

C-2014

OA-1256/MPQ-4A

After the potentiometers in the CP-319 radar data computer have been aligned those lock nuts have to be tightened. Maybe you did put the pressure to 'em, but during a jaunt across rough terrain the nuts work loose and let the pots shift.

Before tightening the locking nut, remember . . . put a wrench grip on the spanner nut. If you don't, you'll pop the wires underneath the pot panel.

CAREFUL WHEN ADJUSTING POT NUTS

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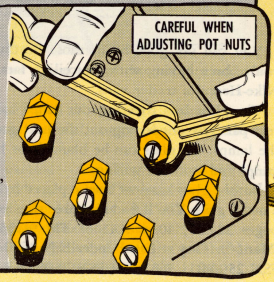


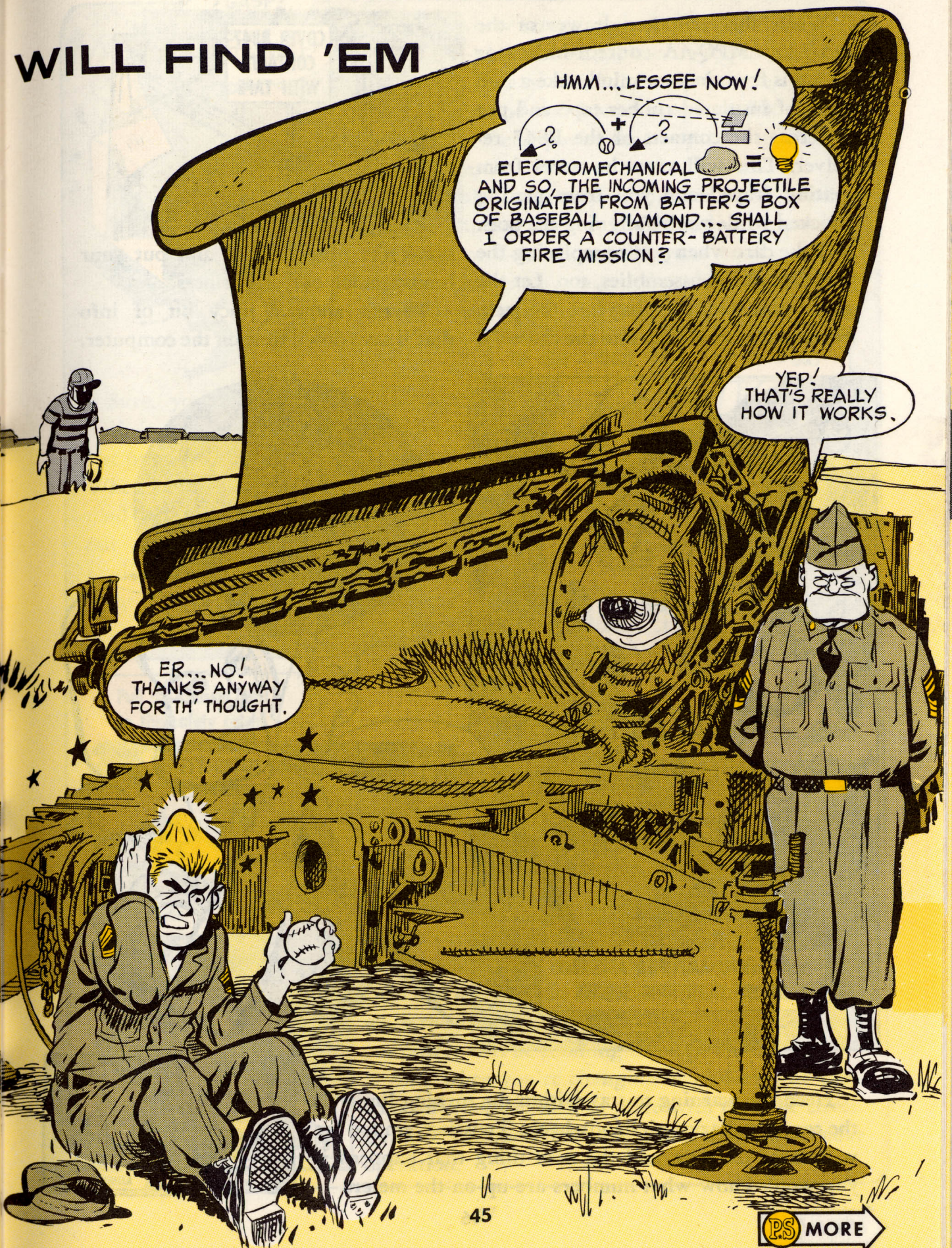
HMM... LESSEE NOW!

ELECTROMECHANICAL AND SO, THE INCOMING PROJECTILE ORIGINATED FROM BATTER'S BOX OF BASEBALL DIAMOND... SHALL I ORDER A COUNTER-BATTERY FIRE MISSION?

YEP! THAT'S REALLY HOW IT WORKS.

ER... NO! THANKS ANYWAY FOR TH' THOUGHT.

MORE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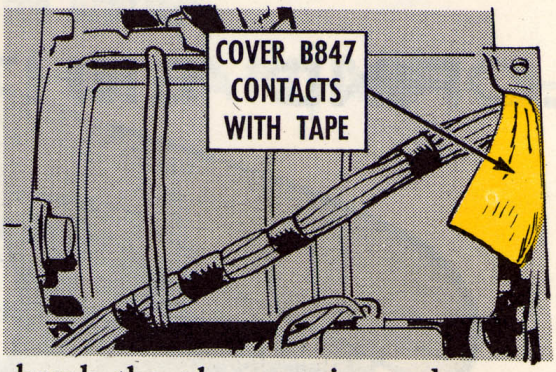
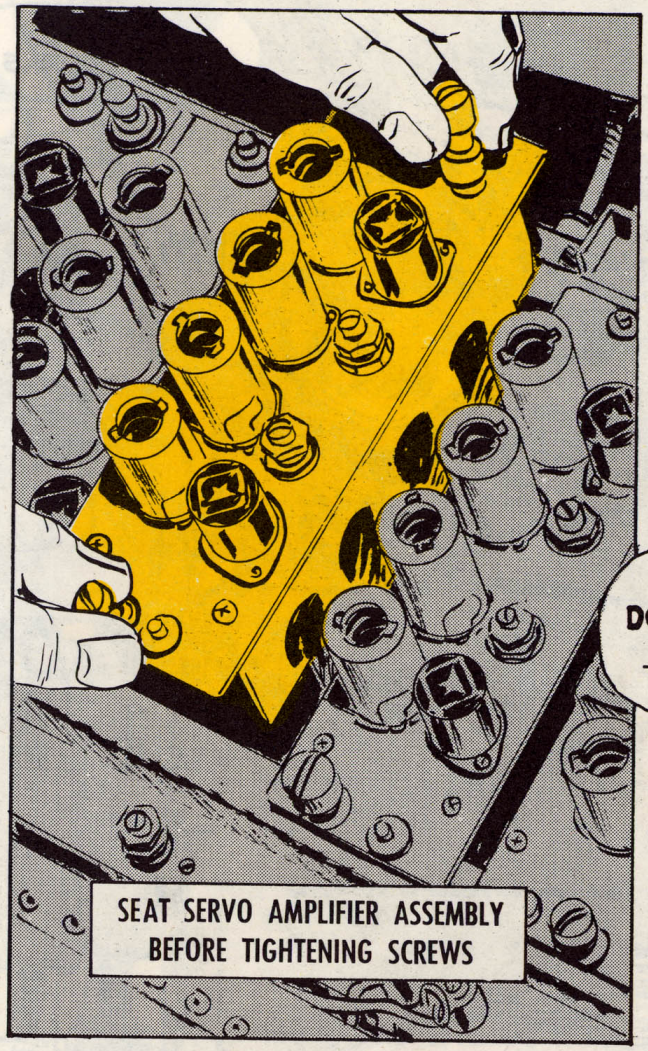
While the computer drawer of the OA-1256/MPQ-4A control-indicator group is fresh in your mind, take a 3-in piece of insulated rubber tape and put it across the contacts of the B847 resolver. This will save the wires from getting frayed and you from getting shocked while you're aligning the pots.

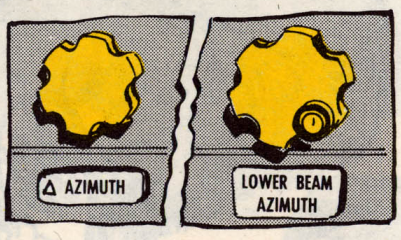


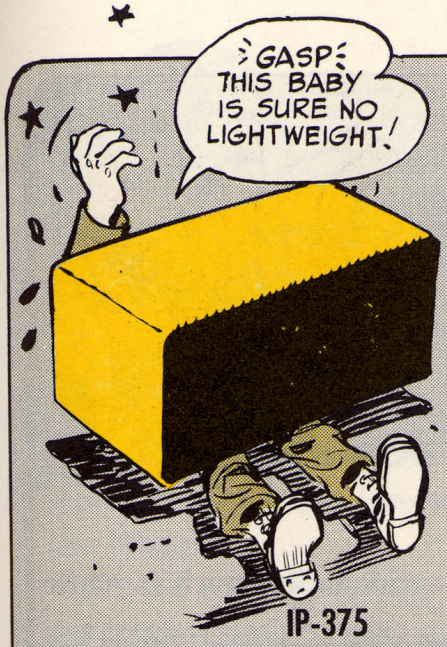
Take care when you're replacing the servo amplifier assemblies, too. Let the guide pins steer the plug into the jack. Forcing the amplifiers into the chassis'll break the plug or pins and put your brainy radar out of business.

There's another juicy bit of info that'll save down time on the computer.



Heed the warning to stay within the turning limits of the range and azimuth handwheels. Twisting 'em too far will shear off pins, and the next thing that happens is you won't know what numbers are up on the meters.





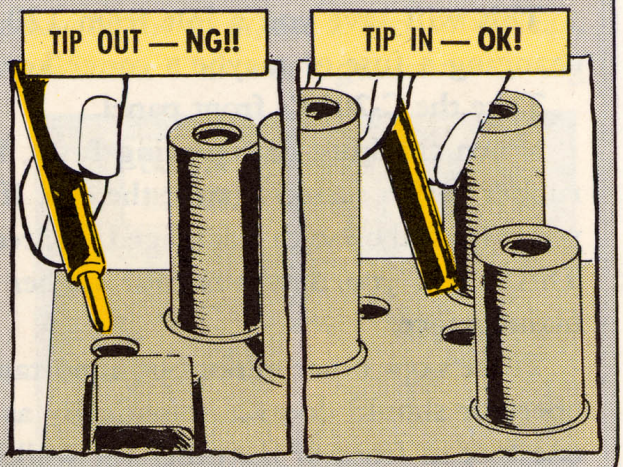
IP-375

And, if you're remoting the OA-1256 on the MT-133 control-indicator stand, be sure to pull only one drawer at a time or it'll fall flat on its face.

You might find it awkward to operate 586 pounds of electronic metal power that way . . . especially if you're under it.

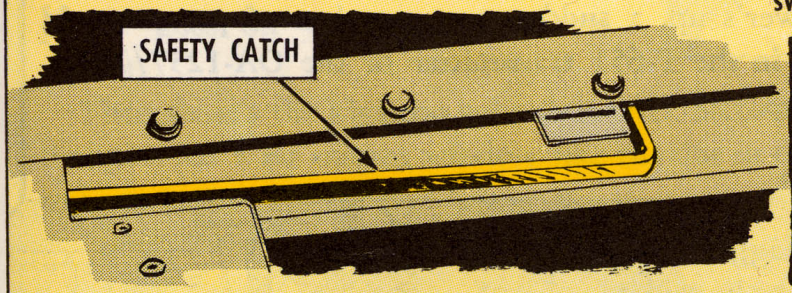
Incidentally, with only one drawer out — whether it's the computer drawer, IP-375 indicator, azimuth and range or C-2014 control power supply — make sure the safety catch is engaged or the drawer'll drop into your lap or on your toes.

Sure, you can't see what the test probe's doing when you put it into a test point. But, that's the way to use it. When you unscrew the insulator to extend the tip, you'll wind up grounding out the oscilloscope and get a false reading. So, keep that insulator in its sheath.

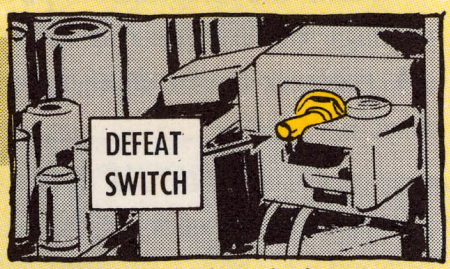


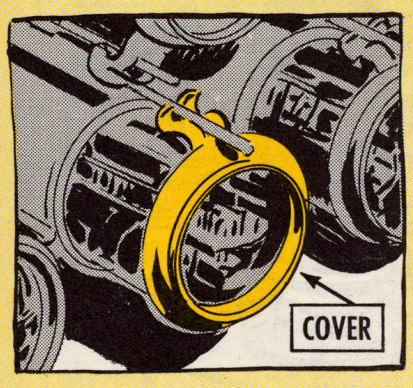
C-2014

Pull the chassis out to the safety catch . . .



. . . before throwing the interlock defeat switch on the right side of the cabinet.

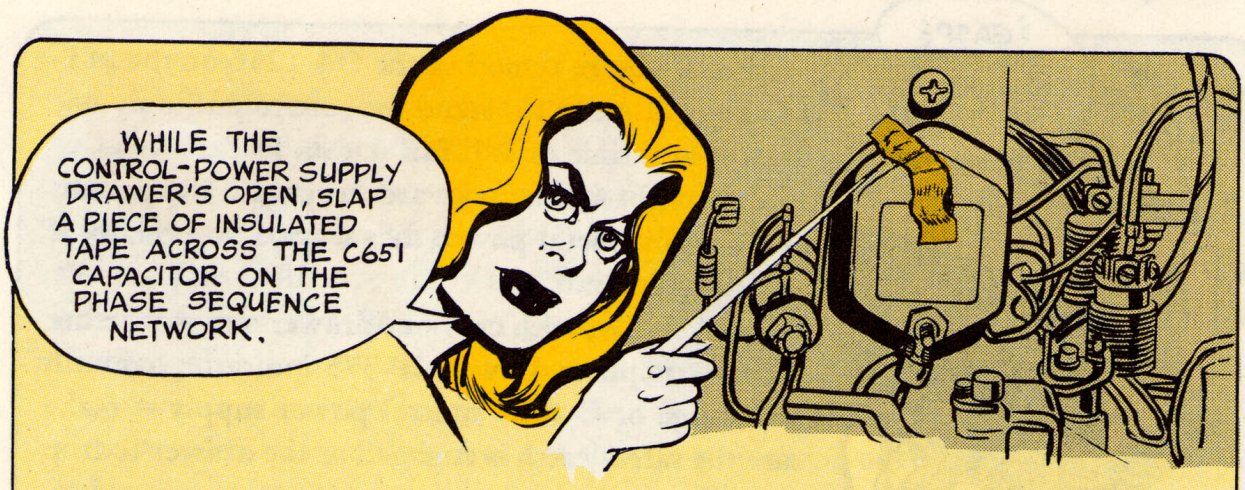




Don't trip the switch unless the chassis is out, or the switch's cover can be broken by the L-shaped switch trigger. This also can leave the switch on when the drawer's closed, and a lot of potent, dangerous power will be zooming through the radar set.

And, when you're changing or replacing an electron tube, lock it back in place with the tube cover. Or, any vibration'll loosen it and knock out radar operation.

P.S. MORE



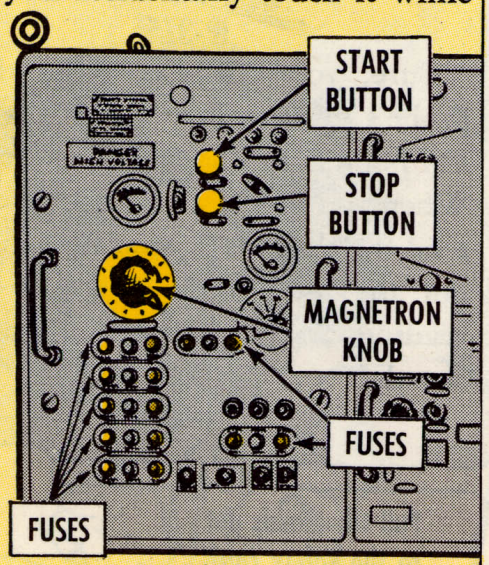
This will save you a jolt from 120 volts if you accidentally touch it while changing a fuse or maybe a cotter key.

Take the C-2014's front panel.

When checking or replacing fuses, keep the rubber gasket seated against the cap. If it slips, you can wind up with a damaged fuse receptacle. This'll cost you downtime for higher echelon maintenance.

There's one other minor but important job an operator should do as automatically as putting one foot in front of the other for walking.

That is . . . turn the magnetron power knob to ZERO or counterclockwise before pushing the MAIN POWER starter stop button.



When the magnetron power's up, a sudden surge or loss of power could damage the magnetron tube in the T-651 transmitter of the OA-1257/MPQ-4A receiver-transmitter group.

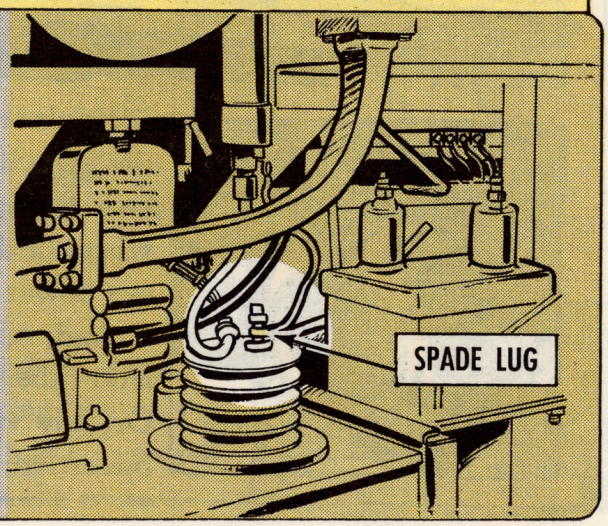
OA-1257/MPQ-4A

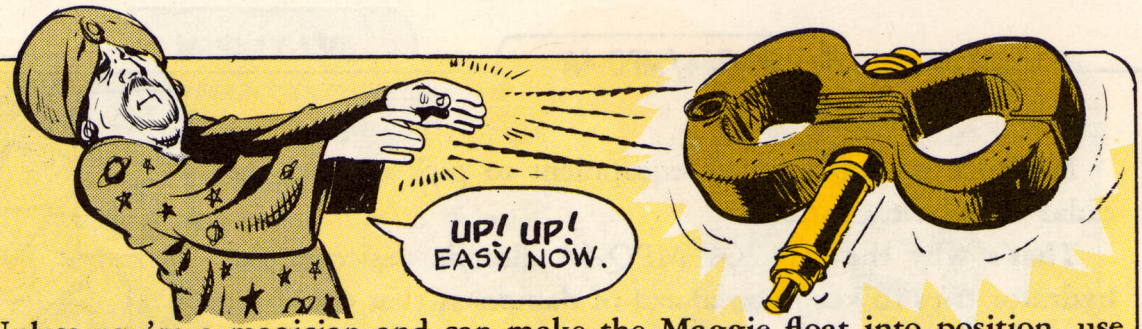
Since the subject of the Maggie has popped up, there's something to be said about it.

In replacing it be sure to tie the lead with the red spade lug to the top of the pulse transformer (T1106) on Pin 2. The pin has a red dot identifying it.

Get those leads crossed and the life of the tube is shortened.

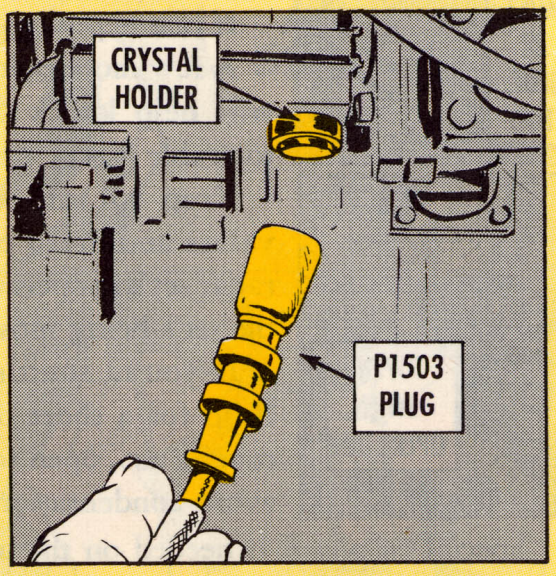
Another thing that will knock out the magnetron tube is fingerprints.





Unless you're a magician and can make the Maggie float into position, use extreme care when installing it. Your best bet's to keep protective covering on until it's installed. 'Cause handling either the output waveguide window or white, feed-through insulating stem will set up a slow burn . . . and out goes the Maggie.

Should you accidentally touch the window or the stem, use a very soft, clean, dry, cotton cloth to wipe away the finger evidence. This won't guarantee saving the tube, but it'll up the odds a lot.

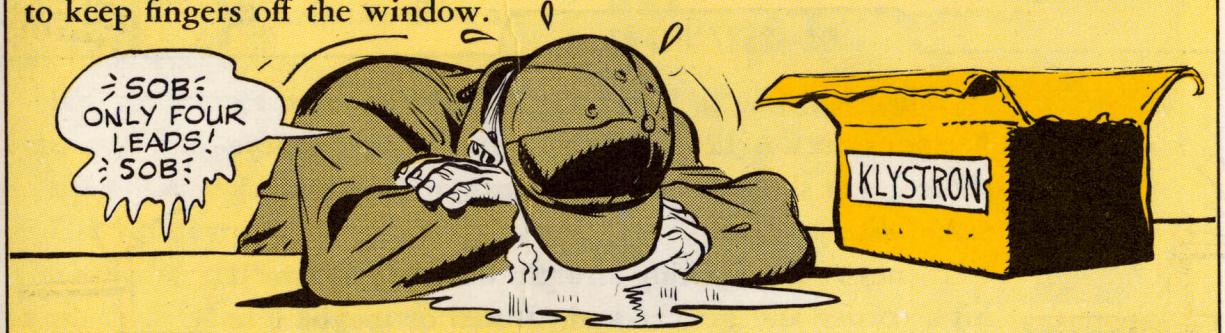


If for some reason the crystal's insulating sleeve in the C-2102 control monitor gets lost, misplaced, or whatever you want to call it, don't sweat it.

Get a piece of cellophane tape or plastic "spaghetti," 3/8 inch in diameter and 1/2 inch long. Insert the tape or "spaghetti" into the crystal holder, connect the P1503 plug and presto . . . the crystal's doing its job.

Without the insulator when the power goes on you'll get a blown crystal.

Then there's the klystron tube (VA-94B, SRU-210, MKK-24) in the receiver that also has a RF output window like the one in the magnetron tube. You have to keep fingers off the window.

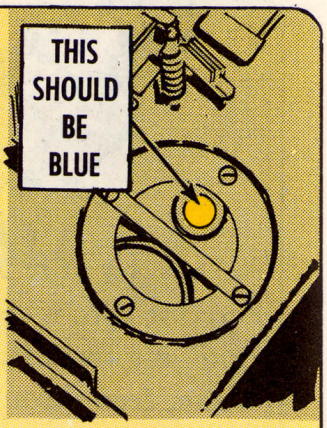


By the way, if you wind up with a klystron replacement with only four leads, don't flip.

Latch onto a fifth lead wire . . . maybe from the defective tube. Connect it to the P1506 plug and one of the tube holding screws. That'll do it.

PS MORE

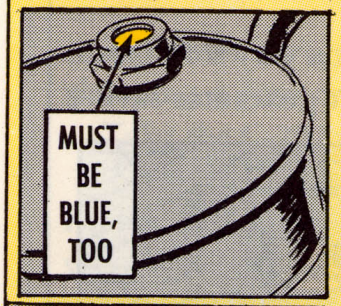
HD-264/MPQ-4A



Moisture has no favorite equipment to pick on and the radar set's no exception.

That's why the HD-264/MPQ-4A electric desiccant dehydrator tries to keep you ahead of dampness that could set up arcing and put the set on the blink.

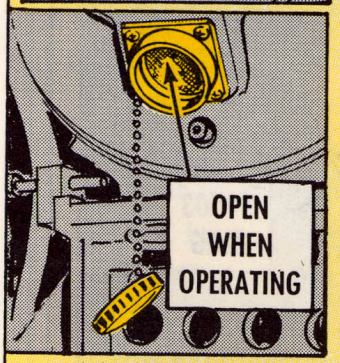
Take, f'rinstance, the moisture indicator window in the HD-264. It should be deep blue (no moisture) . . . That's only half the picture since there are two desiccant chambers.



Open the dehydrator cover to see if both chambers have blue indicators. If they're both blue . . . Fine.

If one is pink—change it.

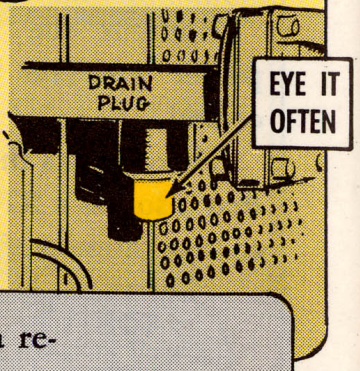
A few more points to remember that will help knock down moisture to a tolerable size.



Keep all air vents, filter covers, valves and drain plugs open when the radar set's in operation and closed when the set's being moved.

If you're shutting down that brain child for a short time, leave all vents, covers, etc., open for about one hour to avoid condensation.

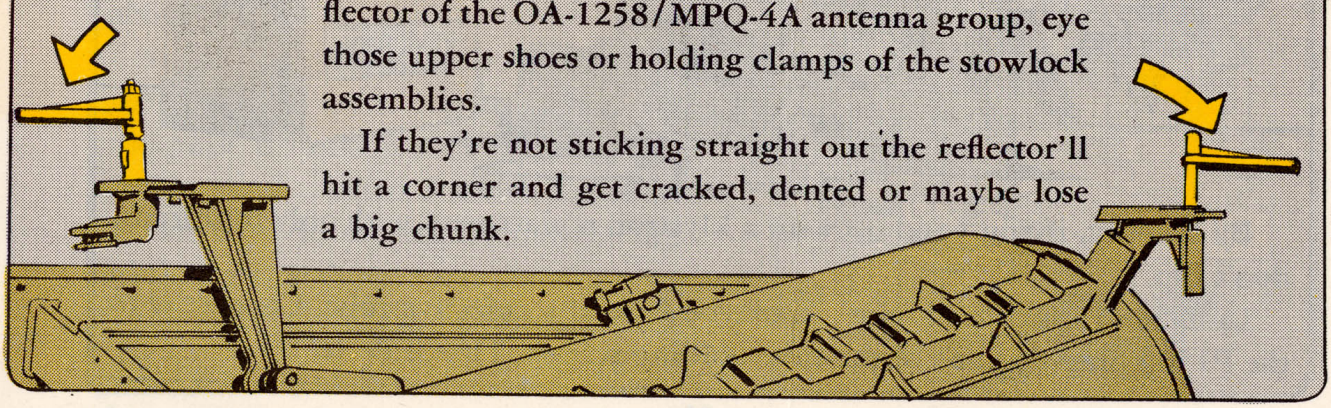
Special emphasis is needed on the opening and closing of the drain plug for the waveguide system in the OA-1257's receiver-transmitter cabinet. A buildup of moisture here will cause arcing into the transmitter and damage the magnetron.



OA-1258/MPQ-4A

When it's time to lower the AT-634 antenna reflector of the OA-1258/MPQ-4A antenna group, eye those upper shoes or holding clamps of the stowlock assemblies.

If they're not sticking straight out the reflector'll hit a corner and get cracked, dented or maybe lose a big chunk.



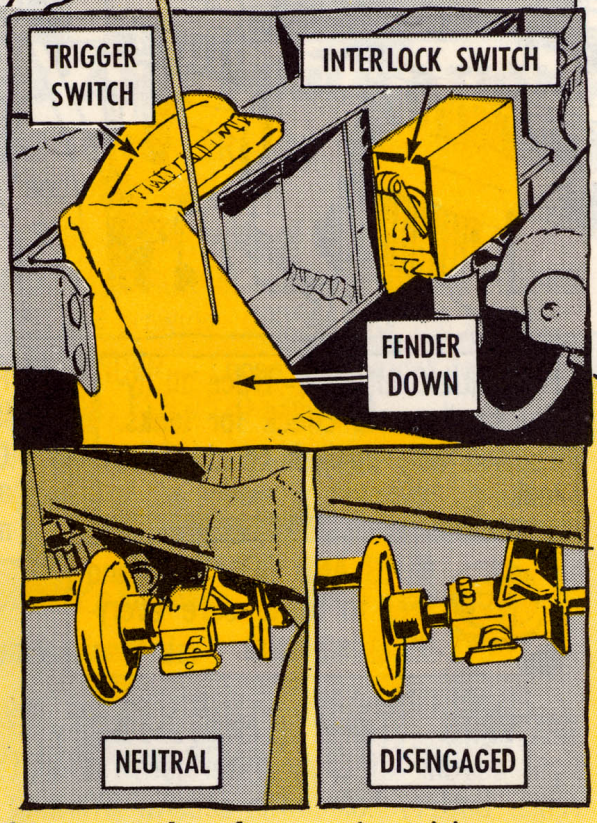
M454 (V-130)

It sure can smart getting a cracked shin on the outrigger pad handle of the V-130 trailer chassis. Right?

To get around without a skinned shin or bruises, give the handle on the outrigger a wide berth and keep big feet off.

Another NO STEP on item is the fender when it's down. The fender gets twisted and won't lock when it's up, thus disabling the interlock to cut-out traversing mechanism.

In the up position . . . you can step all over the fender.



HANDWHEEL DEAL

Carrying a lot of weight around with the radar set is the azimuth drive assembly handwheel.

It's so important it's worth three senses to know the handwheel shaft is in the position it's supposed to be.

Use your eyes, ears, and touch to tell you whether the locking pin on the azimuth shaft is in the engaged, neutral or disengaged position.

If the shaft is betwixt and between the engaged and neutral position, gears can chip or break, jamming the radar's azimuth movement.

A sheared gear would put the set on the mortar tracking sidelines.

PS END

BE YOUR OWN INSPECTOR . . .

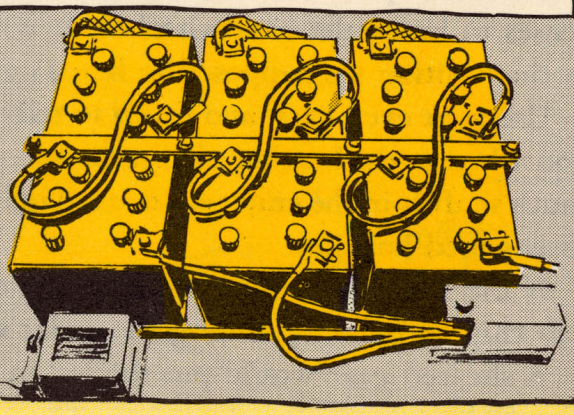
INSIDE YOUR

HYDRAULIC LINES — Trace all hydraulic lines to check for **leaks.** Tighten **only enough** to stop the leaking.

NUTS AND BOLTS — Hand feel to make sure everything is secure.

BATTERIES — Terminals clean and tight with light coating of GAA. Water level at split rings. Battery holddowns secure. (Warning — **If you find a loose terminal, don't tighten it until all 3 ground straps have been disconnected.)**

POWER PACK OIL LEVEL — Check like it says in the LO after the turret motor has gone through a pumping cycle. If the oil level is above or below the FULL AFTER PUMPING mark on the gage, call your mechanic.



BE YOUR OWN INSPECTOR . . .

INSIDE YOUR M60

PART 2

OK! HERE'S THE INSIDE STORY ON YOUR MAIN BATTLE TANK.

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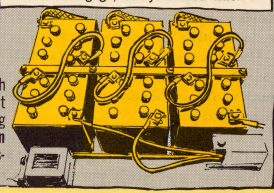

FORMS AND PUBLICATIONS

EQUIPMENT LOG BINDER — All forms and records filled out and up to date.

FORMS — SF91 and 2 copies of DD Form 518.

STRAP LOCATION DIAGRAM—Drawing number 7953850 for the M60 and drawing 10905447 for the M60A1.

PROTECTIVE BINDER — Loose leaf binder for LO and -10 TM issued as FSN 7510-738-6164.

TECHNICAL MANUALS—Latest editions, complete with changes (if any) of the following manuals:

Operator's Manual	— TM 9-2350-215-10
Lubrication Order	— LO 9-2350-215-12
Xenon Searchlight	— TM 5-6230-204-15
Gas Particulate Filter	— TM 3-4240-216-12

Plus the operator's manuals for the radios and weapons.

PS MORE

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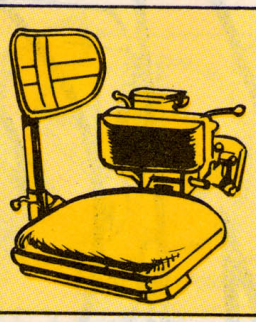
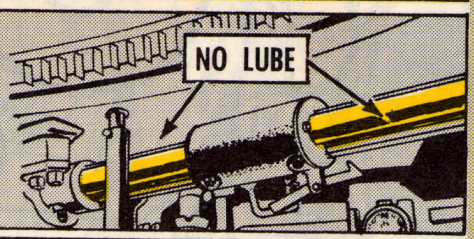
PS MORE

LET'S LOOK DRIVER'S

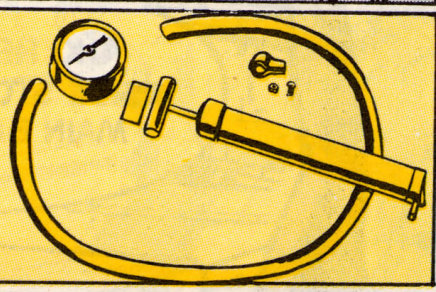
SEAT — Moves freely both up and down and from side to side. Support bar and shaft both lubed. Backrest present. Padding on both seat and backrest serviceable. Trip lever dumps seat.



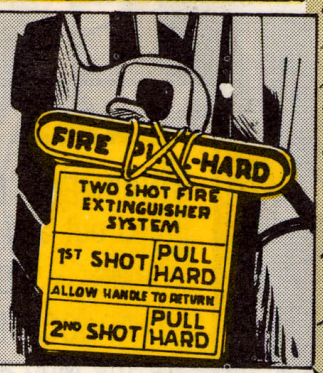
DRIVER'S HATCH — **Not stuck, must open and close smoothly.** Shaft must not be lubed. A lubed shaft counts as a gig.



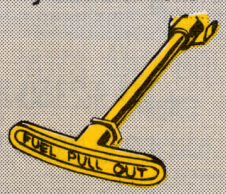
HULL TURRET SEAL—Test by inflating with pump to 25 PSI. Check it one hour later. If it has dropped below 24 PSI jot this down on your DA Form 2404.



FIXED FIRE EXTINGUISHERS — **Seals unbroken** on internal control handle and **lines tight.** Check tag for date of filling. **Extinguishers not empty.** (Cylinder must be recharged or replaced if its weight loss is more than 10 percent of the difference between the full and empty weight marked on the cylinder).



FUEL SHUTOFF HANDLE — Lightly lubed. Works easily. **Not stuck.**



ENGINE COMPARTMENT

DRAIN VALVES—Open and close to be sure they work easily.

DRIVER'S COMPARTMENT

PERSONNEL HEATER—Check for **leaks.**

LET'S LOOK AT THE DRIVER'S COMPARTMENT

SEAT — Moves freely both up and down and from side to side. Support bar and shaft both lubed. Backrest present. Padding on both seat and backrest serviceable. Trip lever dumps seat.

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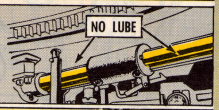

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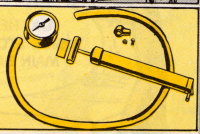

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ENGINE COMPARTMENT

DRIVER'S COMPARTMENT

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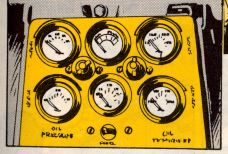
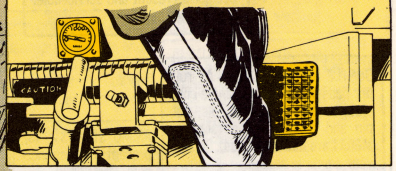
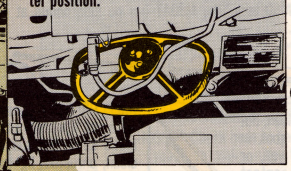
ALL INSTRUMENTS—Glass covers not missing, cracked or painted over, **instruments and warning lights work.** Operate within normal limits set on pages 2-9 to 2-12 of your -10 TM.



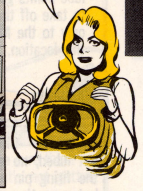
BRAKES — Release smoothly under 1,000-PSI on brake pressure gage (M60A1 only) when transmission shift lever is moved from P (Park) to N (Neutral).



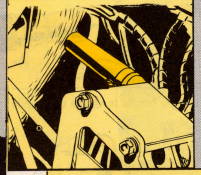
STEERING WHEEL — With engine stopped, pull full right and let go; then full left and let go. **In both cases wheel or bar must snap completely back to center position.**



TRY IT A COUPLE OF TIMES!

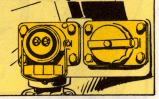


PURGE PUMP HANDLE—Works. Wiring not frayed or broken.



ACCELERATOR—Moves smoothly. (If it binds check the linkage for 7.62 MM brass or other debris).

SLAVE CABLE OUTLETS — Securely mounted, not burned or pitted.



MORE

AT THE COMPARTMENT

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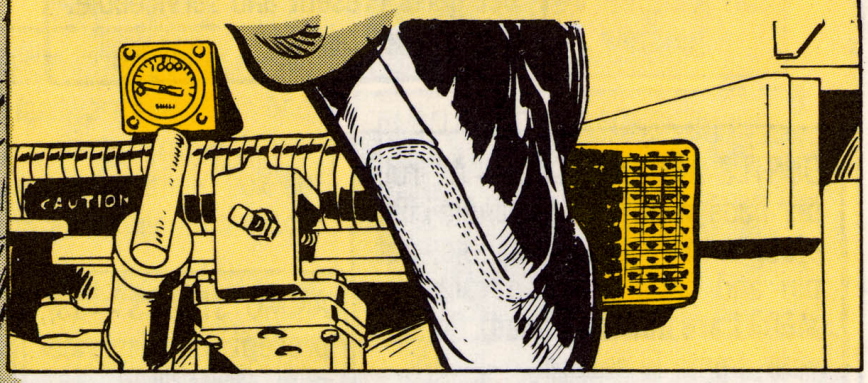

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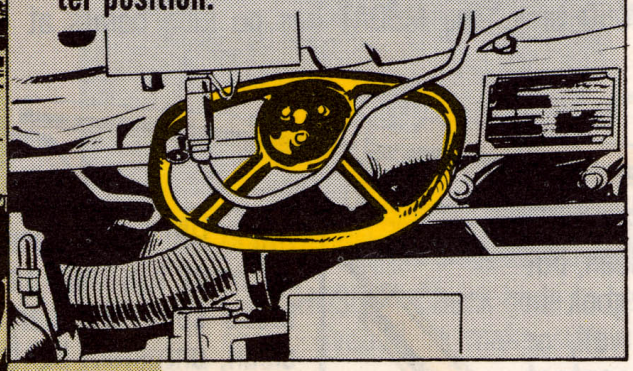

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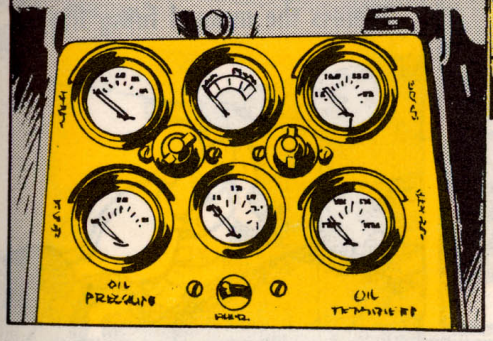

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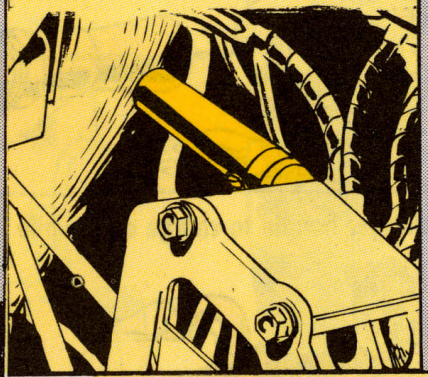
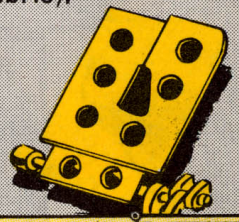
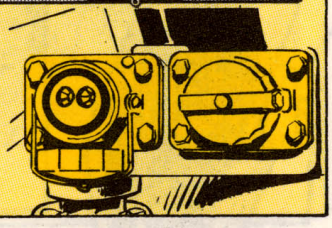


ACCELERATOR—Moves smoothly. (If it binds check the linkage for 7.62 MM brass or other debris).

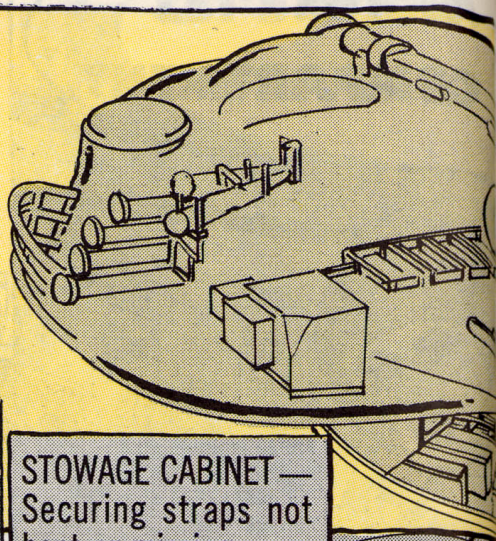


SLAVE CABLE OUTLETS — Securely mounted, not burned or pitted.



PS MORE

AMMUNITION CLAMPS — All rubber parts present and serviceable. Clamps not bent.

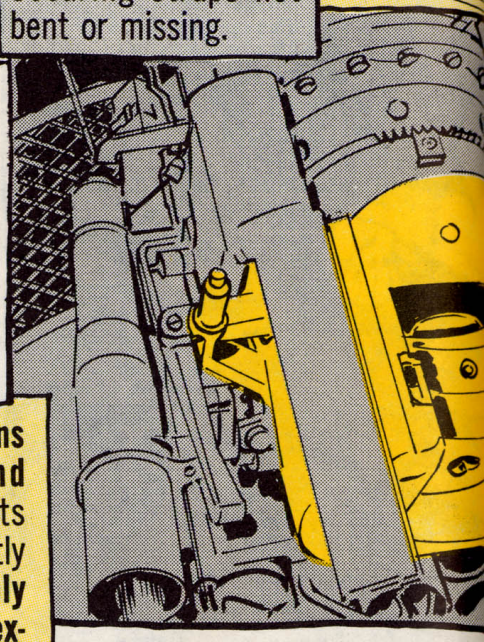


BUSTLE AMMO RACKS — All rubber pads secure. Each handle complete with 2 springs, handle, nut, pin and collar. **(Bustle racks on M60A1 are not to be used).** Be sure your ammo is secure.

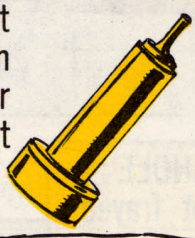
AMMO STRAPS — (3), present and serviceable. (M60 only).

STOWAGE CABINET — Securing straps not bent or missing.

MAIN GUN — Make sure the 2 gun cradle trunnion bearing lube points get lubed like it calls for in the LO. You have to take off the ballistic shield to get at 'em. This applies only to the M60 tank. The M60A1 has no lube points at this location.



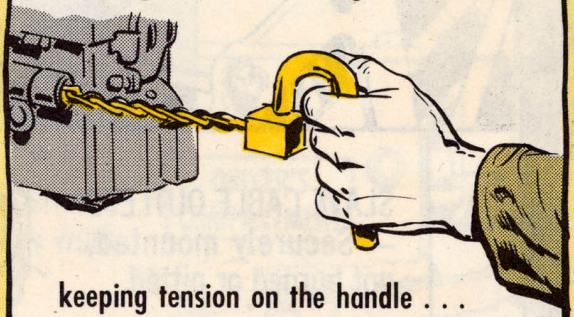
FIRING PIN—Clean, but not lubed, no gook in the firing pin well, or between the contact and the ignitor cam.



BREECHBLOCK—**Opens without binding and locks securely,** parts clean, unrusted, lightly lubed. **Closes sharply with a snap when extractors are tripped.**

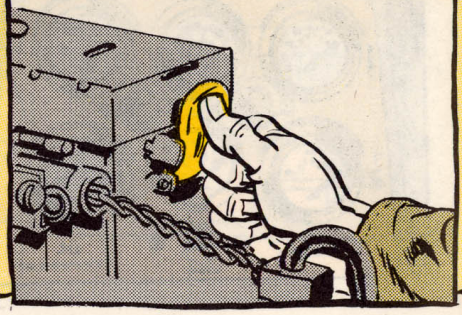
MACHINE GUN M73 —

Pull charger handle to charge and, while



keeping tension on the handle . . .

Depress the manual firing trigger.



LET'S TAKE A LOOK AT ARMAMENT

AMMUNITION CLAMPS — All rubber parts present and serviceable. Clamps not bent.

BUSTLE AMMO RACKS — All rubber pads secure. Each handle complete with 2 springs, handle, nut, pin and collar. **(Bustle racks on M60A1 are not to be used).** Be sure your ammo is secure.

AMMO STRAPS — (3), present and serviceable. (M60 only).

STOWAGE CABINET — Securing straps not bent or missing.

AMMO BOXES (TURRET PLATFORM FLOOR) — Hardware complete and tight, bolts, lockwashers, and flatwashers (4 each per ammo box on M60A1 and 5 each per ammo box on M60 tank).

TURRET VENTILATOR—Turn ON for a few seconds to **make sure it's working.**

AMMUNITION RACKS (honeycombs)—all mounting hardware present and tight. Handles and springs work right. Be sure your AMMO is secure.

MAIN GUN — Make sure the 2 gun cradle trunnion bearing lube points get lubed like it calls for in the LO. You have to take off the ballistic shield to get at 'em. This applies only to the M60 tank. The M60A1 has no lube points at this location.

RECOIL MECHANISM — Check for **indicator tape broken** inside the replenisher cylinder by gently pulling on the tape. Check your log book to make sure the gun has been fired or the recoil exercised within the past six months. If not check your Form 2404.

TAPE

REPLENISHER HOSE — Check hose to be sure there are no soft spots. Eyeball to make sure it's not getting pinched.

FIRING PIN—Clean, but not lubed, no gook in the firing pin well, or between the contact and the ignitor cam.

BREECHBLOCK—**Opens without binding and locks securely,** parts clean, unrusted, lightly lubed. **Closes sharply with a snap when extractors are tripped.**

HERE'S HOW YOU CHECK THE GUN!

MACHINE GUN M73 — Check function of the gun.

Pull charger handle to charge and, while keeping tension on the handle . . .

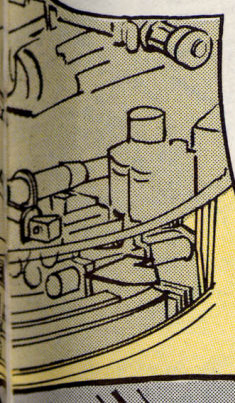
Depress the manual firing trigger.

Barrel extension must release with safety in "F" position.

F

MORE

LET'S TAKE A LOOK AT ARMAMENT



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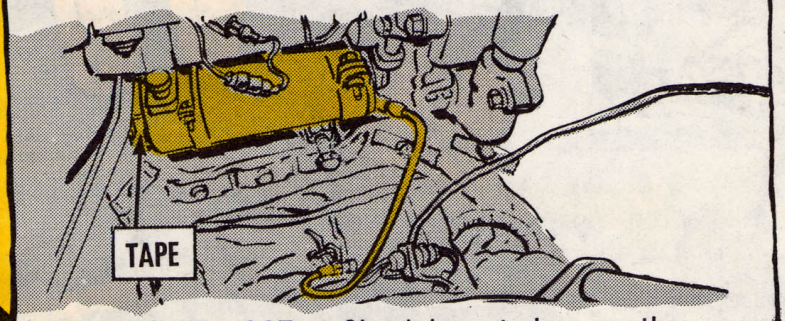

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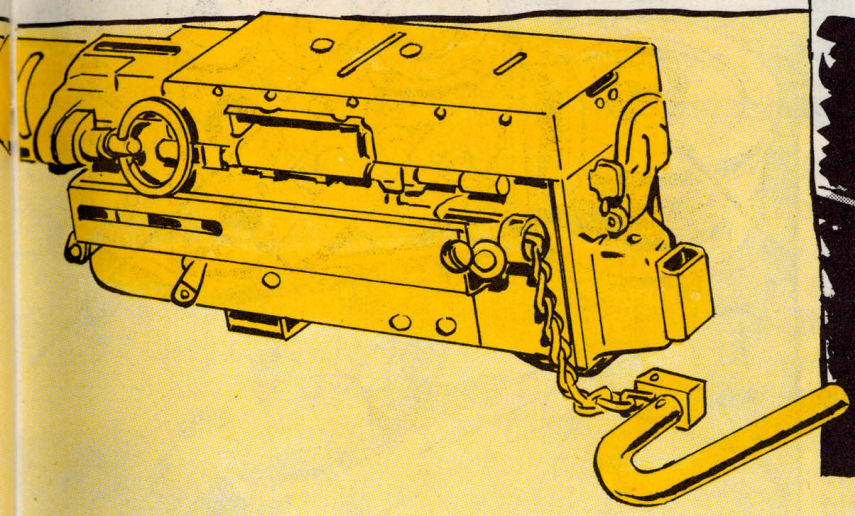

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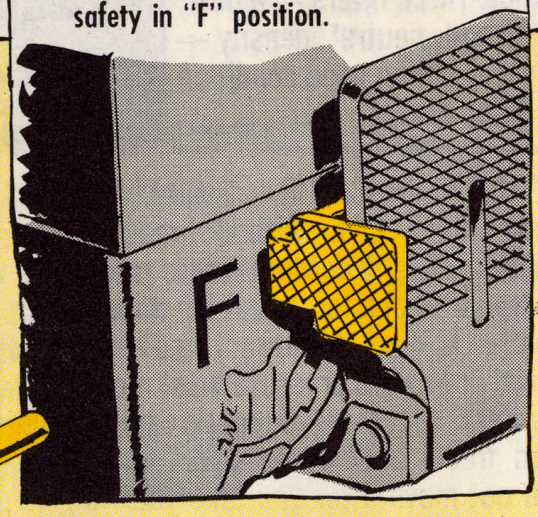
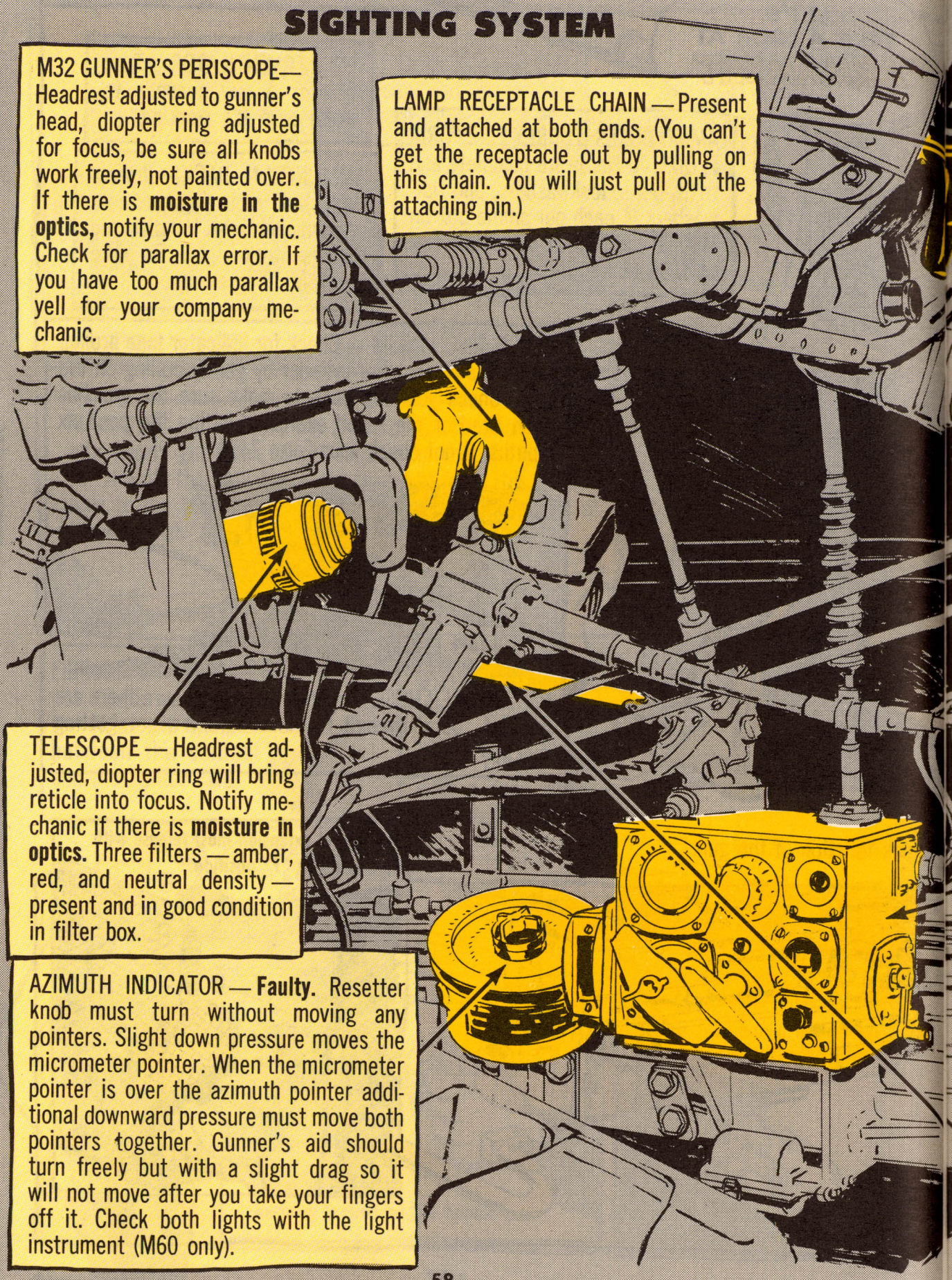


P.S MORE

SIGHTING SYSTEM



M32 GUNNER'S PERISCOPE—Headrest adjusted to gunner's head, diopter ring adjusted for focus, be sure all knobs work freely, not painted over. If there is **moisture in the optics,** notify your mechanic. Check for parallax error. If you have too much parallax yell for your company mechanic.

LAMP RECEPTACLE CHAIN — Present and attached at both ends. (You can't get the receptacle out by pulling on this chain. You will just pull out the attaching pin.)

TELESCOPE — Headrest adjusted, diopter ring will bring reticle into focus. Notify mechanic if there is **moisture in optics.** Three filters — amber, red, and neutral density — present and in good condition in filter box.

AZIMUTH INDICATOR — **Faulty.** Resetter knob must turn without moving any pointers. Slight down pressure moves the micrometer pointer. When the micrometer pointer is over the azimuth pointer additional downward pressure must move both pointers together. Gunner's aid should turn freely but with a slight drag so it will not move after you take your fingers off it. Check both lights with the light instrument (M60 only).

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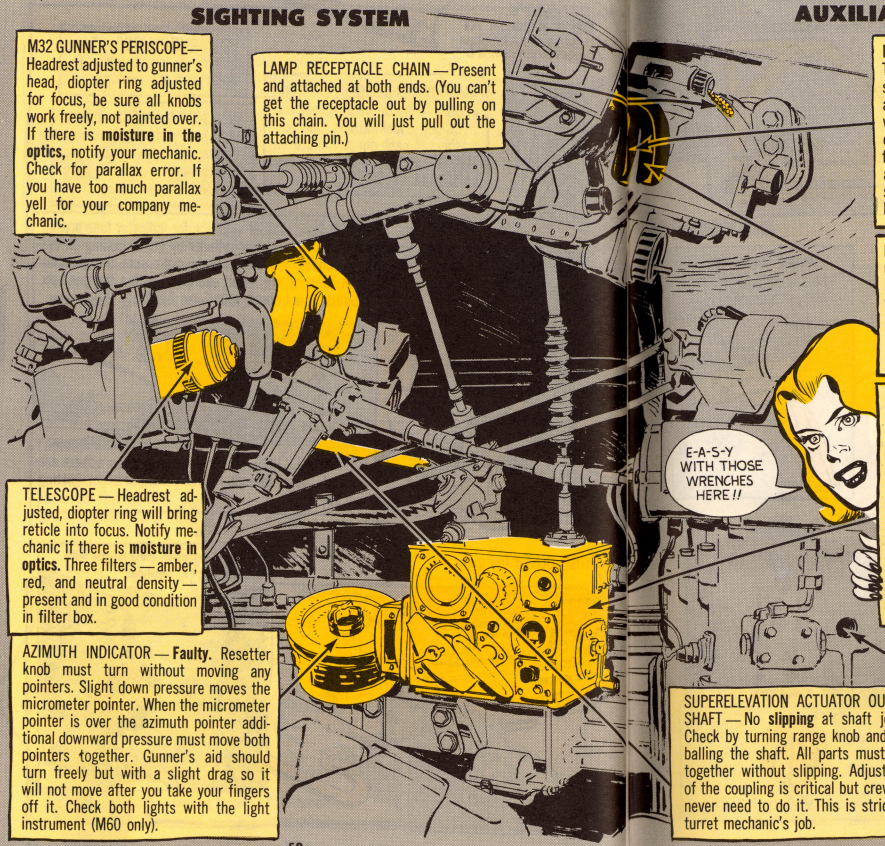

SUPERELEVATION ACTUATOR OUTPUT SHAFT—No **slipping** at shaft joints. Check by turning range knob and eyeballing the shaft. All parts must turn together without slipping. Adjustment of the coupling is critical but crewmen never need to do it. This is strictly a turret mechanic's job.

AUXILIARY INSTRUMENTS

RANGE FINDER—**Moisture or fungus inside optics.** TB ORD 668 (Jul 65) gives you the dope on having your support purge and nitrogen charge the range finder at least once every 90 days. All knobs present and free working, no scales painted over. (All knobs, levers and controls are made to operate freely without using force.) Spare bulb box should contain four 1203 bulbs and two 313 bulbs. (Always have all range finder switches OFF when you change a bulb or you might burn out a resistor.)

RANGE FINDER HEADREST—Secure and clean, rubber not chunked, lightly powdered. (Clean rubber on all headrests with damp cloth only. Dry cleaning solvent will rot the rubber. For powder use Talc, technical powdered (soapstone) Type IV, Class C, FSN 6810-270-9989 for the 1 lb can. It's listed in SB 38-100 on page 33.)

COMPUTER—Check it out like it tells you in para 3-268 of your -10 manual. When you change the bulb in the reset button light, twist the reset indicator lens cap to the left until it screws off. Never, (but never) put a wrench on the hex nut behind this lens cap because twisting this nut could make two wires touch which would short out the computer. The cover over the range scale light bulb is soft metal and you hafta be very careful not to cross-thread it. The ammunition selector handle is plenty strong enough if you don't rough-house with it . . . release it gently. Be sure the superelevation hand crank is pushed all the way out before you touch the reset button.

TRAVERSE GEAR BOX—Check oil level. If it is below the filler plug line add oil as called for in the LO. If the oil looks red get it down on your 2404.

DS MORE

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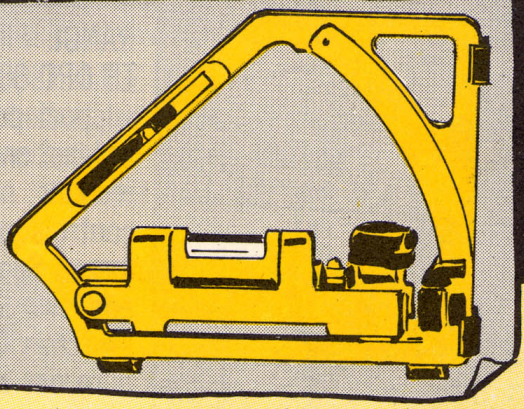
P.S. MORE

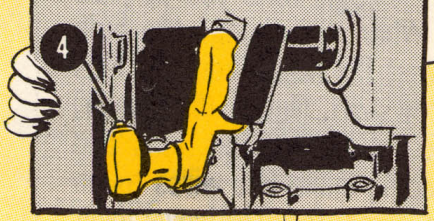
MORE AUXILIARY INSTRUMENTS!

GUNNER'S QUADRANT—Level vial unbroken and index lines legible. Index plunger holds firmly but disengages easily, elevation scale readable, micrometer knob works smoothly and without skipping. Cover turns freely and locks in closed position to protect vial. Make the end-for-end test like it says in FM 17-12.

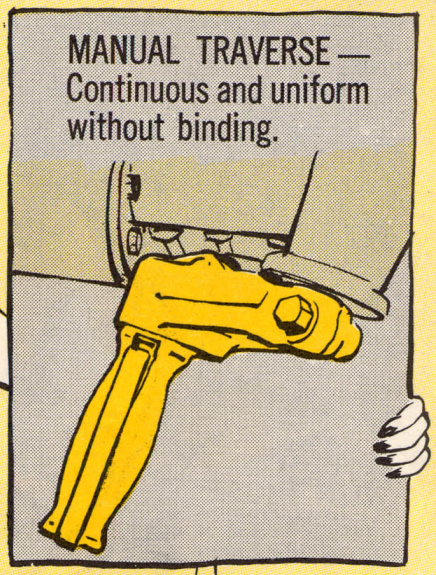


TURRET

MANUAL ELEVATION—**Must work right.** After checking to make sure you won't hit anything, test action of manual elevation handle. Action should be continuous and uniform without "spongy" feel.



MANUAL TRAVERSE—Continuous and uniform without binding.



GUNNER'S CONTROL BOX—All switches operate smoothly and all lights light up.

POWER OFF—Never (not ever) turn the power OFF while the turret is still in motion because that can damage your pin lock.

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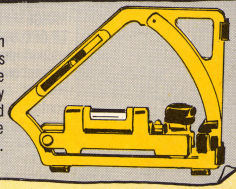

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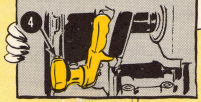

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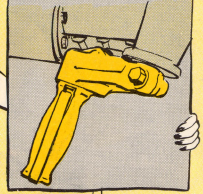
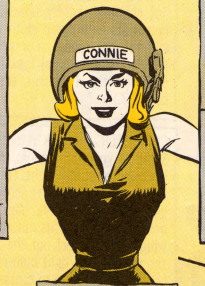
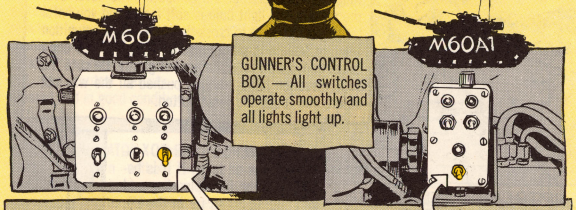






GUNNER'S CONTROL BOX—All switches operate smoothly and all lights light up.

POWER OFF—Never (not ever) turn the power OFF while the turret is still in motion because that can damage your pin lock.

ELEVATION QUADRANT—(M13A3 or M13A1.) Level vial tube unbroken, scale legible, instrument light M30 (M60 only) present and serviceable. (If light does not burn brightly, make sure it is a 3-volt No. 43 bulb, not a 24-volt No. 313.) Light source control (M60A1 only) serviceable. Check elevation quadrant with a gunner's quadrant.

CONTROLS

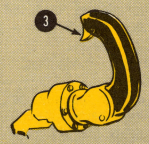
NOBACK ACTION—

With a handkerchief or piece of tape tie the locking lever to the manual traverse handle so that it can not engage.

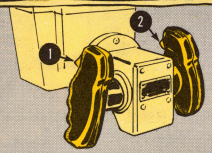
Now use the commander's power control handle to traverse left 900 mils at maximum speed. Slam to a stop.

Now do the same thing traversing right. If the manual traversing handle spins during this action, the noback is out of whack. Tell your turret mechanic to get it fixed before somebody gets clobbered.

COMMANDER'S POWER CONTROL HANDLE—Linkage in good adjustment. With turret in power, test by holding the handle steady and pressing the override. Shifting should take place but you should get no movement of the handle. If the **handle kicks backward** it means the elevation linkage is too long. If the **handle kicks forward,** elevation linkage is too short. Likewise, if the **handle kicks to the right** the traversing linkage is too short and if it **kicks left** the traversing linkage is too long.



FIRING TRIGGERS—**Must operate right.** With circuit tester make a continuity check of all 4 firing triggers. ❶ ❷ ❸ ❹
When you touch a trigger the bulb in the tester should flash for a split second only. **If it keeps on burning while you hold the trigger depressed,** call your mechanic and tell him you have a dangerous malfunction.



MORE

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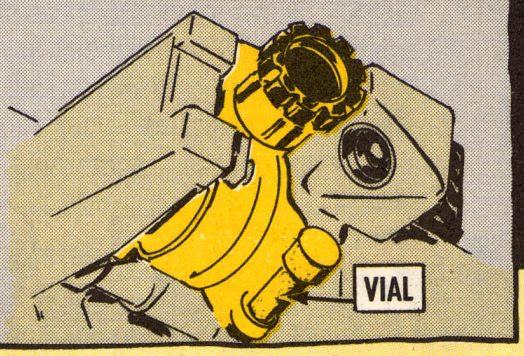

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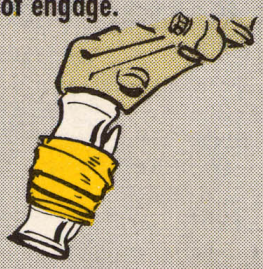

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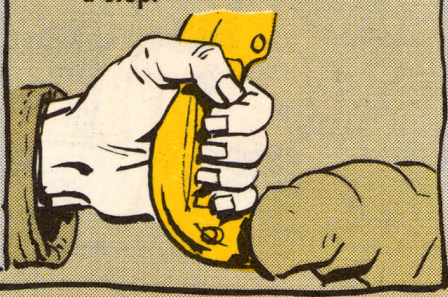

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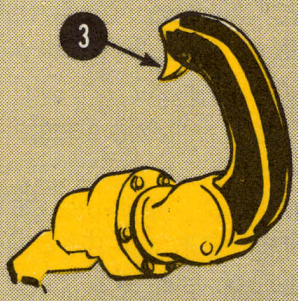

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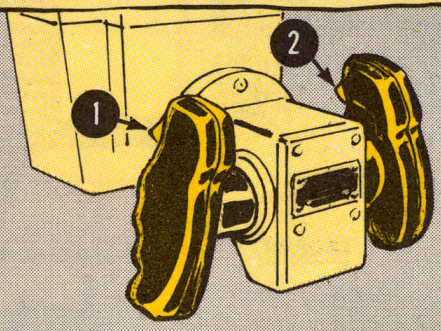
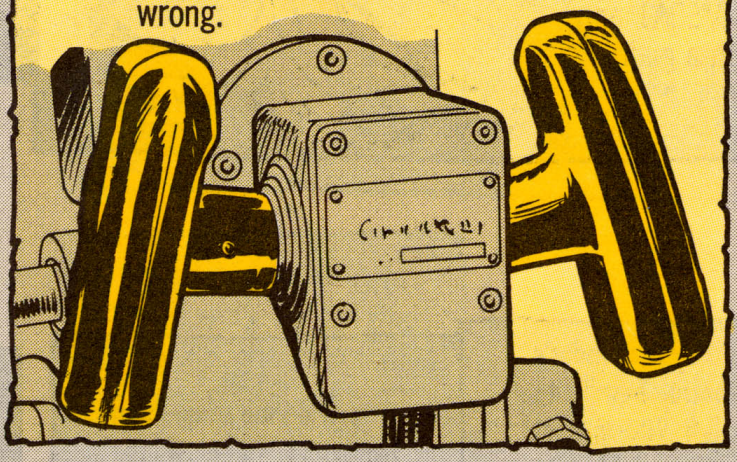


PS MORE

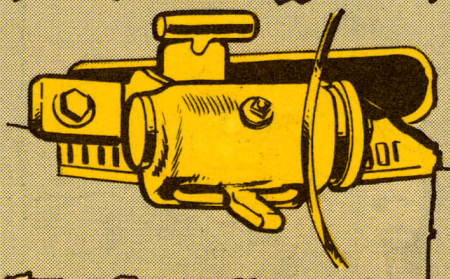
GUNNER'S POWER CONTROL HANDLES — Move them into traversing position (tilted) but without touching the magnetic brake switch. **If the turret moves,** call your turret mechanic because something is wrong.



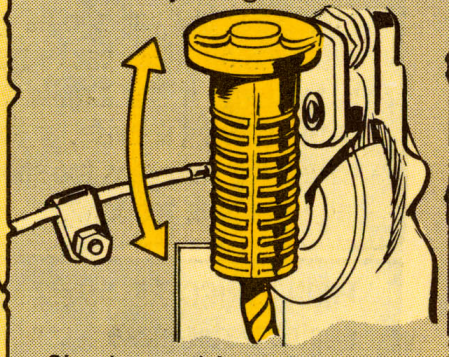
BRAKE WEAR — **Braking Action.** When you traverse with the gunner's or commander's power handles, be sure you get the handle to neutral (center) position before you let go of the magnetic brake switches. Otherwise you put a lot of extra wear on the brake.

COMMANDER'S

AZIMUTH LOCK—Push down on the azimuth lock handle, check to make sure it stays down. If it won't work, make a note on your Form 2404.

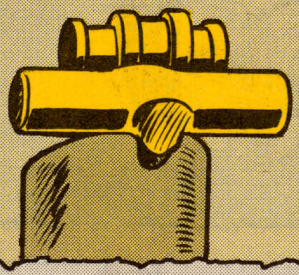


M85 MACHINE GUN — Elevate and depress the machine gun.
If it is harder to move it one way than the other, your equilibrator spring needs adjusting.

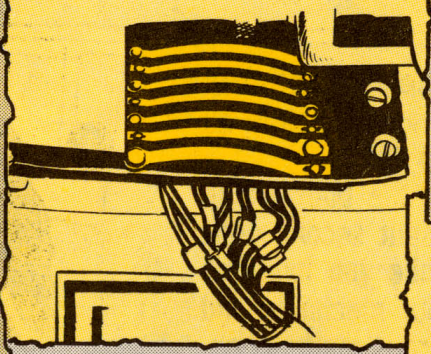


Check condition of electrical wiring to MG.

AZIMUTH INTERLOCK — After pushing forward the azimuth interlock handle to disengage the lock, make a complete traverse.
The interlock handle should not self-engage.
Now pull out the interlock handle and traverse the cupola slowly, like s-l-o-w-l-y. The plunger should fall into the indexing slot when it reaches it, and the cupola should not traverse farther.



CONTACT BOARDS (left and right) — With dome light ON, slowly traverse the cupola in a complete circle. If the light flickers or dims at any point it is a sign the contact boards need cleaning. Write it up on your 2404.



AMMO SYSTEM — Eyeball the feed and ejection system for distortion or loose parts.

TURRET CONTROLS CONTINUED

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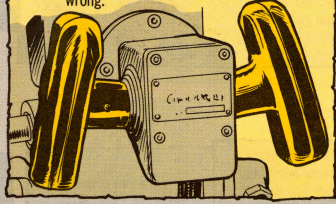

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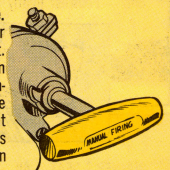

COMMANDER'S CUPOLA

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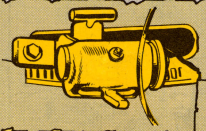

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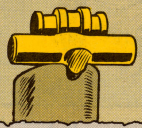

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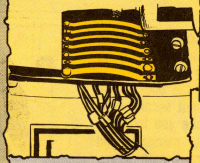

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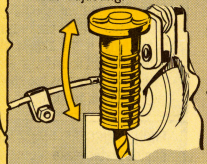

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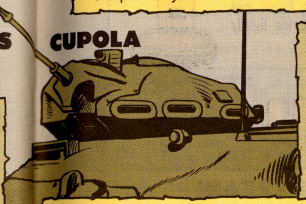
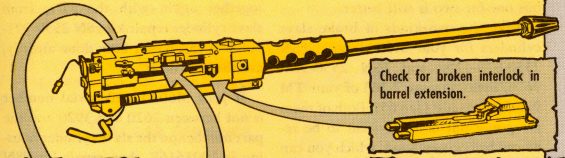


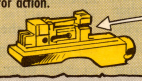
FIRING MECHANISM — Charge the gun, checking the condition and the action of the charger. Try both the manual and the electrical triggers. Look over electrical contacts for burns or dirt. (NOTE: The manual firing handle trigger extension is no longer used, because it can get caught and start the gun firing by accident. If you have one get it taken off. Don't throw it away, though, because you have to turn it in when you turn in your M85.)



Check for broken interlock in barrel extension.

Defective safety and binding of the bolt assembly.

Spare bolt complete and ready for action.



Damaged extractor spring.

PS MORE

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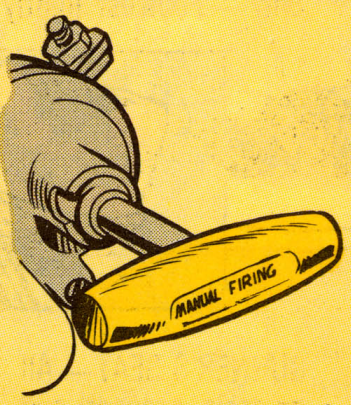
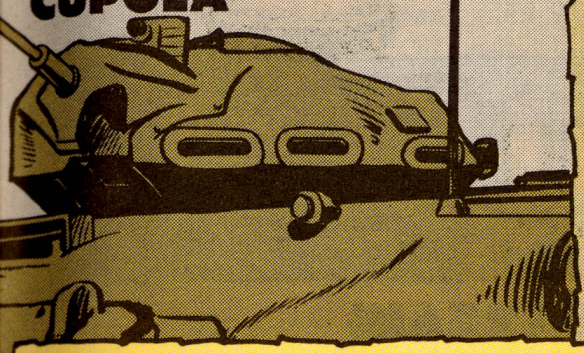


CUPOLA



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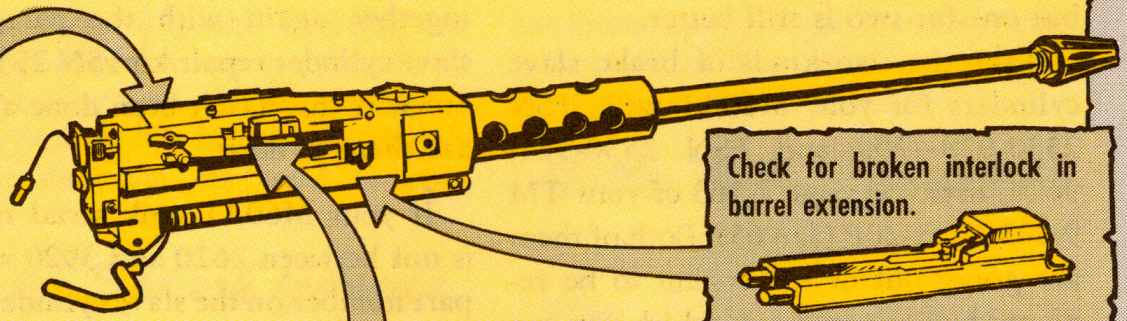

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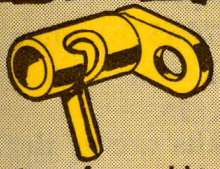
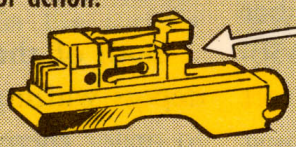


Defective safety and binding of the bolt assembly.

Spare bolt complete and ready for action.



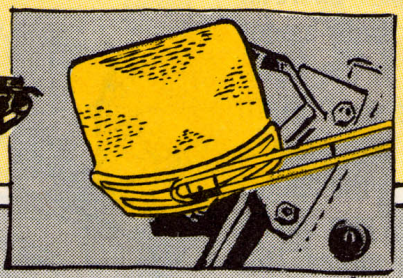
Damaged extractor spring.

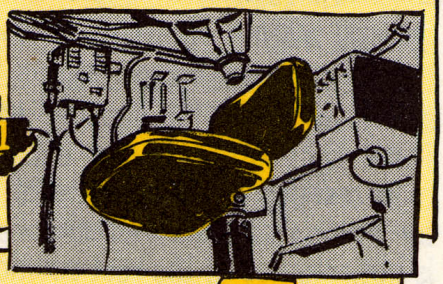
PS MORE

MISCELLANEOUS

AIR CLEANER INLET — Adjusted according to mission and season. Draw air from the turret when fording (a must) and when the air is very dusty outside. In winter draw from the engine compartment. In summer drawing from the turret helps to cool and ventilate the crew compartment.

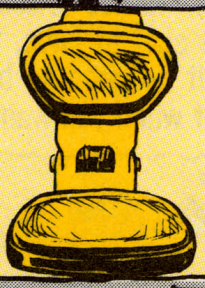
TANK COMMANDER'S SEAT — Platform will lock in stowed position. (Latch not broken.) Seat height adjustment tube lightly lubed. Locking handle works. (M60A1 only — Footrest lightly lubed and not broken.)



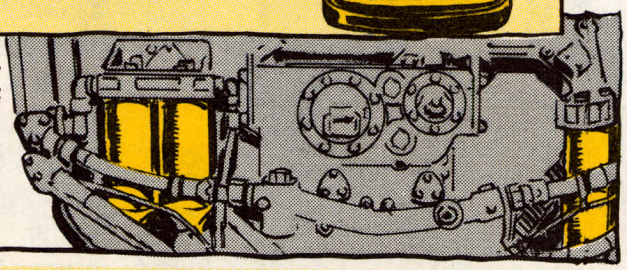


GUNNER'S SEAT — All controls present and operational. Backrest present.

LOADER'S SEAT — Mounting holes not broken. Spring lightly lubed.



FUEL FILTERS — Drain primary and secondary fuel filters like it says on page 3-32 of your -10 manual. This is a daily after-operation job in cold weather and it should be done often even in hot weather.



BRAKE CYLINDER BARGAIN

Sure, two-for-one is a good bargain, but one-for-two is still better.

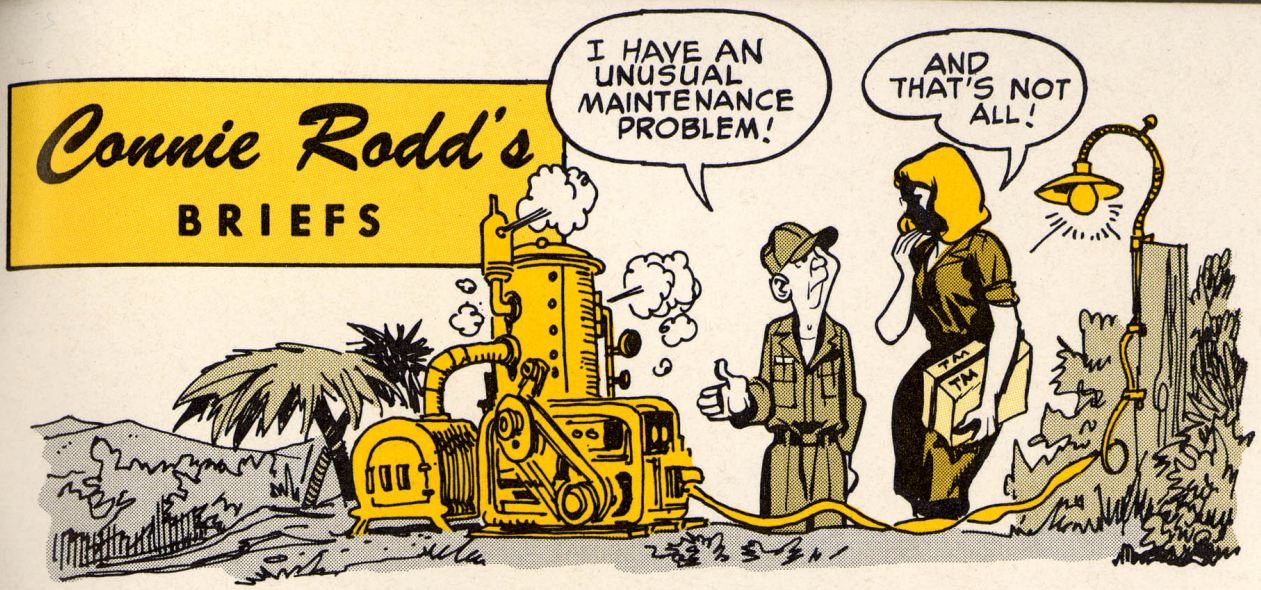
Take the two kinds of brake slave cylinders for your M60A1 tank, FSN 2530-078-4709 and FSN 2530-974-9674, listed on page 2-163 of your TM 9-2350-215-20P (Jan 65). Both of them are going out of the system to be replaced by one new kind, which you can order now as FSN 2530-920-7561 (P/N 10951883).

If your M60A1 tank serial number is between 2620 and 3920 TB 9-2350-215-30/1 (Dec 65) tells your direct support the brake slave cylinders must be taken apart, cleaned, and put back together again with the parts from slave cylinder repair kit FSN 2530-921-5083. If this hasn't been done already, ask them to do it.

If your M60A1 tank serial number is **not** between 2620 and 3920 and the part number on the slave cylinder housing is 10916168, then repair kit FSN 2530-866-9387 (P/N 5703516) must be used.

Both of these repair kits are at the depots waiting for your direct support to order them.

Connie Rodd's BRIEFS



Teletype Lubes

TB 11-5800-204-20/1 (17 Feb 66) does a neat job of putting all your teletype lubes in one package. What's more, it lists three FSN's for stepping switch grease and oil—like Grease, aircraft and instrument, FSN 9150-261-8297; Lubricating Oil, colloidal graphite, FSN 9150-261-7905, and Lubricating Oil, watch, FSN 9150-270-0063. Sizes, respectively, are, 8, 2 and ½ ounce.

Don't Repair

"Leave well enough alone." That old saying goes for a lot of things and there're not many more important than the ram pressure probe assembly on your Nike-Hercules missile. You don't want to fool around with the probe, not for any reason. If it happens to take a beating, send out the word to your support.

Trailer Splash Guards

Now you can get those rubber splash guards for your M127A1C 12-ton semitrailer: Guard, Splash, Wheel, FSN 2540-851-2832. They're in the supply system.

Luminous Compasses

The latest info on safe handling, storage and disposal of luminous compasses containing radium, promethium or tritium is found in TB 5-6600-227-15/1 (9 Feb 66). If you've got one of these compasses, better keep this pub handy.

Tight But Loose

If you happen to own an M416 ¼-ton cargo trailer—and if the lunette won't turn freely—then check out page 118 of TB 750-933-1 (Oct 65). This EIR Digest gives you the go ahead to drill another 11/64-in cotter pin hole a quarter inch back from the present hole. Now you can loosen up slightly on the compression spring and still have room to run a cotter pin through the lunette attaching nut.

Gotta Mil Standard Engine?

When you need air cleaner hose for your 10- and 20-HP Mil Standard engines, order by code number 97403 and part number 13206E1254. Forget about FSN 4720-639-9897 that's listed in TM 5-2805-204-24 (Nov 65). It's not right.

Would You Stake Your Life right now on the Condition of Your Equipment?

So, Keep Yours Water-Free!

DRAIN DIESEL FUEL FILTERS DAILY—

(TWICE A DAY IN HOT HUMID PLACES)

And Drain Water Off Bottom Of Fuel Tank Once A Week.